		•																					•	
5.1.7 Biocceleration Ltd.	Search time 270.726 Seconds (without alignments) 1213.978 Million cell updates/sec	.QKLISEEDLNWHTGHHHHH 748		03	гв: 2443163				cted by chance to have a of the result being printed, score distribution.		8 !	Ad894302 CA 125/07 Ad894303 CA 125/07	Abbitss4 human ova Abp30898 0772P clo	Ada08542 Human ova Adf08885 Secreted			Hypoth	Adu01425 Breast ca	Human Human		Adf08808 Secreted Adg46095 Human ova	Adn40451 Human bre Adx17691 Human ova	Partia Protei	>
GenCore version 5. (c) 1993 - 2006 Bi	sw model:28:19 ;	:	ext 0.5	439378781 residues	chosen parameters	0	0% 100% 100 summaries	* * * * * * * * * * * * * * * * * * * *	results predi to the score of the total	SUMMARIES	E .	ADS94302 ADS94303	ABP30898	ADA08542 ADF08885	ADG46172	AAB12552 AAB99203	ABP30968	ABP30896 ADU01425	ADZ41689 ADA08631	ADA08465 ADF08974	ADF08808 ADG46095	ADN40451 ADX17691	ADX17857 AAE34700	ABG96381
Gen(c)	, using	5-1 TKLF	Gapext			0000	ch 0% ch 10 8t 10	1:* 1980: 2000: 2000: 2003: 2003: 2003:	equal		₽!													
Copyright	веагсh 20, 2	i-10-687-035-1 45 AAQPARRARRIKLFIHRSSV	BLOSUM62 Gapop 10.0 ,	63 seqs,	satisfying	2000000000	mum Match mum Match ing first	Geneseq_21:* geneseqp1980s:* geneseqp2000s:* geneseqp2001s:* geneseqp2001s:* geneseqp2003s:* geneseqp203s:* geneseqp203s:* geneseqp2004s:*	or na	\$ Query	Length		833	833	833	914	914	914	914	914 914	914	914	914	1890
Cop	protein March	US-10-687- 3945 1 AAQPARRA	BLOSUM62 Gapop 10	2443163	hits	length: length:		4	No. is the m greater than derived by a	& Query	Match	99.0	92.9	92.9	92.9	92.0	92.0	922	92.9	92.9 92.9	92.9	92.9	92.9	92.7
	ein -	score:	table:	ġ:	number of	DB seq DB seq	-processing	 യ	Pred. No. score gre and is de	į	Score	3945	3663	3663	3663	3663	3663	3663	3663	3663 3663	3663 3663	3663	3663	3658
	OM proto Run on:	Title: Perfect B Sequence:	Scoring	Searched	Total n	Minimum Maximum	Post-pr	Databas	0. យ ថ	Result	No.	- O	J 44	ഹ ശ	٠,0	96	111	113	15	16 17	18	20 21	222	24

| 1862 | 1868 | 1869 | 1870 | 1880 | 1870 | 1880 | 1870 | 1880 | 1870 | 1880 | 1870 | 1880 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |

```
The present invention describes an isolated antibody, or an antigence binding antibody fragment (I), that preferentially binds cell-associated to binding antibody fragment (I), that preferentially binds cell-associated CA 125/0772 polypeptide. Also described: (I) a monoclonal antibody (II) produced by hybridoma 487; (2) a monoclonal antibody that competes with binding of (II); (3) a hybridoma or comprising an uncleotide sequence that encodes a variable chain region of (I); (5) a pharmaceutical composition comprising an antibody or an antigen-binding antibody fragment that preferentially binds cell-associated CA 125/0772P polypeptide relative to shed CA 125/0772P polypeptide relative to shed CA 125/0772P polypeptide relative composition comprising a manicolonal antibody or an antigen-binding monoclonal antibody fragment cc that preferentially binds cell-associated CA 125/0772P polypeptide, and a carrier; (6) a pharmaceutical composition comprising an antibody, or an antigen-binding antibody fragment that creferentially binds cell-associated CA 125/0772P relative to shed CA 125/0772P polypeptide, and a carrier; (7) an article comprising an antigen-binding antibody fragment that creferentially binds cell-associated CA 125/0772P relative to shed CA 125/0772P relative to shed CA 125/0772P relative to shed CA 125/0772P or an antibody, or an antibody, or an antibody, or an antibody fragment, which preferentially binds cell-associated CA 125/0772P relative to shed CA 125/0772P or antibody fragment, which preferentially binds cell-associated CA 125/0772P relative to shed CA 125/0772P operably linked to a heterologous composition in a form suitable for administration to a subject; (8) a feature to shed CA 125/0772P operably linked to a heterologous composition of a CA 125/0772P relative to shed CA 125/0772P or an antibody fragment, which preferentially binds cell-associated disorder (10) ameliorating (MI) a symptom of a CA 125/0772P related disorder (10) anellorating (MI) a symptom of a CA 125/0772P related disorder (10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel isolated antibody, or antigen-binding antibody fragment binding with cell-associated CA 125/0772P polypeptide relative to shed CA 125/0772 polypeptide, useful for ameliorating cervical or ovarian cancer.
Amino aci
Human 077
Secreted
                                                                                                                                                                                                                                                                                                                                                                                                     antibody; antigen-binding antibody fragment; cell-associated CA 125/0772P; monoclonal antibody; cytostatic; fimunostimulant; mediator of lysis; tumour; cell proliferative disorder; cancer; cervical cancer; uterine cancer; breast cancer; lung cancer; ovarian cancer.
Abp31025 / Ada08747 / Adf09090 / Adf
                                                                                                                                                                                                                                                                                                                                                             125/0772P 3-repeat amino acid sequence SEQ ID NO:1.
                                                                                                              ALIGNMENTS
ABP31025
ADA08747
ADF09090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example; SEQ ID NO 1; 153pp; English
                                                                                                                                                                                                                              ADS94302 standard; protein; 748 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-OCT-2002; 2002US-0418828P.
10-JUL-2003; 2003US-0485986P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-OCT-2003; 2003WO-US032945
                                                                                                                                                                                                                                                                                                                        (first entry)
    318
318
318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (EURO-) EUROCELTIQUE SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Albone EF, Soltis DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-357171/33.
    34.1
34.1
34.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2004035537-A2
                                                                                                                                                                                                                                                                                                                        02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-APR-2004
  1345
1345
1345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                  RESULT 1
ADS94302
  98
```

```
antibody fragment; (11) an antibody or antigen binding antibody fragment that competes with (VI); and (12) a pharmaceutical composition comprising (VI) and a carrier. (I) has cytostatic activity, and can be used as an immunetimulant and a mediator of lysis of positive tumour cell. (I) is useful for ameliorating a symptom of a CA 125/O77P-related disorder which is a cell proliferative disorder such as cancer, cervical or uterine cancer, breast or lung cancer or ovarian cancer. (V) is useful diagnostically for monitoring the development or progression of cancer or tumour as part of clinical testing procedure. The present sequence represents the CA 125/O772P 3-repeat amino acid sequence, which is used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IALRSVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDXDSLYL 300
                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361 FNSTEGVLOHLLRPLFOKSSMGPFYLGCOLISLRPEKDGAATGVDTTCTYHPDPVGPGLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NGYNEDCPDEPPTTPKDATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 NGYNEPGPDEPPTTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601 AQPGTINYQRNKRNIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TSSEYITLLRDIQDKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661 ARRVDRVAIYEEFLRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNSADIQHSGGRS
                                                                                                                                                                                                                                                                                                                                  ITNLRYEENMAPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGV
                                                                                                                                                                                                                                                                                                                                                                        DAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTST
                                                                                                                                                                                                                                                                                                                                                                                          DAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTST
                                                                                                                                                                                                                                                                                                                                                                                                                             GVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FNSTEGVLQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLD
                                                                                                                                                                                                                                                           1 AAQPARRARRIKLFIHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFT
                                                                                                                                                                                                                                                                           ITNLRYEENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGV
                                                                                                                                                                                                                                0; Gaps
                                                                                                                                                                                                   Length 748;
                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                      8
                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                      8
                                                                                                                                                                                                     100.0%; Score 3945;
100.0%; Pred. No. 0;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SLEGPRFEOKLISEEDLNMHTGHHHHH
                                                                                                                                                                                                     Query Match
Best Local Similarity 100.
Matches 748; Conservative
                                                                                                                                                                            Sequence 748 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
          88888888888888888
                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                        원
                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                             ∂
                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      è
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                        ઠે
```

C,

RESULT 2 ADS94303

```
antibody, antigen-binding antibody fragment; cell-associated CA 125/O772P; monoclonal antibody, cytostatic; immunostimulant, mediator of lysis; tumour; cell proliferative disorder; cancer; cervical cancer; uterine cancer; breast cancer; lung cancer; ovarian cancer.
                                   CA 125/0772P 3-repeat TM amino acid sequence SEQ ID NO:2.
ADS94303 standard; protein; 809 AA
                                                                                                                         L5-OCT-2003; 2003WO-US032945
                                                                                                                                      2002US-0418828P
2003US-0485986P
                        (first entry
                                                                                                                                                        (EURO-) EUROCELTIQUE SA.
                                                                                                                                                                    Albone EF, Soltis DA;
                                                                                                                                                                                WPI; 2004-357171/33.
                                                                                                 WO2004035537-A2
                                                                                                                                     16-OCT-2002;
10-JUL-2003;
                        02-DEC-2004
                                                                                                             29-APR-2004.
                                                                                    Synthetic
           ADS94303
```

Novel isolated antibody, or antigen-binding antibody fragment binding with cell-associated CA 125/0772P polypeptide relative to shed CA 125/0772 polypeptide, useful for ameliorating cervical or ovarian cancer. present invention describes an isolated antibody, or Example; SEQ ID NO 2; 153pp; English

07-NOV-2000 (first entry)

AAB12554;

```
61 ITNIAYEENWWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGV 120
                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                             181 GVVSEBPFTLNFTINNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRV 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 DAICTHRPDPTGPGLDRBOLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTST 180
                                                                                                                                                                                                                                                                                                                                                                        241 IALRSVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYL 300
                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601 AQPGTINYQRNKRNIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPL 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721 GLAGLIGLITCLICGVLVTTRRKKEGBYNVQQQCPGYYQSHLDLEDLGNSADIQHSGGR 780
                                                                                                                                                                                                                                                                                                                                                                                                                                   NGYNEPGPDEPPTTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541 QVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDK 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---NSADIQHSGGR 719
                                                                                                                                                    1 AAQPARRARRTKLFTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                      FNSTEGVLQHLLKPLFQKSSMGPFYLGCQLISLRPBKDGAATGVDTTCTYHPDPVGPGLD
                                                                                                                      1 AAQPARRARRIKLFTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFT
                                                                                                                                                                                   61 ITNLRYEENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGV
                                                                                                                                                                                                                                                121 DAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTST
                                                                                                                                                                                                                                                                                                             GVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FNSTEGVLQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421 IQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TSSEYITLLRDIQDKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481 TSSEYITLLRDIQDKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AQPGTTNYQRNKRNI EDALNQLFRNSS I KSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPL
                                                                                         61;
                                                            809;
                                                            Length
                                                                                         Indels
used in the exemplification of the present invention.
                                                            8
                                                                                         .
0
                                                            8
                                                         Score 3904.5;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SSLEGPRFEQKLISEEDLNMHTGHHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720 SSLEGPRPEOKLISEEDLNMHTGHHHHH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB12554 standard; protein; 833
                                                           Query Match
Best Local Similarity 92.5%;
Matches 748; Conservative
                              Sequence 809 AA;
                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
SXS
                                                                                                                                                   셤
                                                                                                                                                                                 ઠે
                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BXXXEX
                                                                                                                        ઠે
                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

613 677

493 557 553

497

673

```
This invention relates to polypeptides comprising an immunogenic portion of an ovarian carcinoma protein which acts as an immunostimulant and is cytostatic. The polypeptides, polynucleotides, antibodies, fusion proteins, T cell populations and antigen presenting cells that express the polypeptides are useful for stimulating an immune response in a patient and treating ovarian cancer. This sequence represents protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polypeptides comprising an immunogenic portion of an ovarian carcinoma protein or its variants, useful for stimulating an immune response in a patient and treating ovarian cancer.
                                                    498 GVTQLGFYVLDRDSLFINGYAPQNLSIRGSYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                            678 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVALYEEF
438 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWBLSQLTH
                                   GVIQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                         DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                      NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fling SP, Retter MW, Fanger GR;
Hill P, Albone E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; immunostimulant; cytostatic; cancer; ovarian carcinoma
                                                                                                                                                                                                                                                                                                                            LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                774
                                                                                                                                                                                                                                                                                                                                                 Example 2; Page 316-318; 408pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Algate PA,
Carter D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABP30898 standard; protein; 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-00617747.
2000US-00636801.
2000US-00667857.
2001US-00827271.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-JUL-2001; 2001WO-US022635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-00884441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , King GE,
Vedvick TS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-164781/21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0772P clone 21003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; ABN72969.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 833 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200206317-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-AUG-2000;
20-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mitcham JL,
                                     434
                                                                                                                                                                                                                                                        614
                                                                                                                                                                                                                                                                                                                                  674
                                                                                                             494
                                                                                                                                                                                    554
                                                                                                                                                                                                                                                                                                                                                                    738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABP30898;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Reed SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CORI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                       용
                                                                                                                                         셤
                                                                                                                                                                                  ð
                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                  셤
                                8
                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention describes an isolated polypeptide comprising an immunogenic portion of an ovarian carcinoma protein (or its variants). Ovarian carcinoma proteins, and polynucleotides encoding them, have cytostatic activity and can be used in gene therapy and vaccines. Ovarian carcinoma polypeptides, nucleic acids, antibodies and vaccines are useful for the prevention, diagnosis and treatment of cancer, preferably ovarian cancer. AAA69691 to AAA70077 and AAB12552 to AAB12557 represent human ovarian carcinoma polynucleotides and proteins used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        318 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             178 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDFTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FIHRSSVSTISTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                            acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLFQKSSMGPPYLGCQLISLRPEKDGAATGVDTTCTYHDDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBFFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunogenic portion of an ovarian carcinoma protein and the nucleic encoding it, useful for the diagnosis, prevention and treatment of cancer, preferably ovarian cancer.
                                       Human; ovarian carcinoma; ovarian cancer; therapy; diagnosis;
tumour antigen; identification; cytostatic; gene therapy; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 833;
   ovarian carcinoma antigen 0772P protein SEQ ID NO:389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 3663; DB 3;
Pred. No. 2.2e-315;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                       Frudakis TN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 2; Page 200-203; 299pp; English
                                                                                                                                                                                                                                                                                                                                                                         Algate PA,
                                                                                                                                                                                                                                         98US-00215681.
98US-00216003.
99US-00338933.
99US-00404879.
                                                                                                                                                                                                       99WO-US030270.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 92.9%;
Best Local Similarity 99.9%;
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                       Mitcham JL, King GE,
                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-431589/37.
N-PSDB; AAA70075.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 833 AA;
                                                                                                                                                                                                                                                                                                                                    CORIXA
                                                                                                                                  WO200036107-A2
                                                                                                                                                                                                                                         17-DEC-1998;
17-DEC-1998;
23-JUN-1999;
                                                                                                Homo sapiens
                                                                                                                                                                                                         17-DEC-1999;
                                                                                                                                                                                                                                                                                                24-SEP-1999;
                                                                                                                                                                     22-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198
                                                                                                                                                                                                                                                                                                                                    (CORI-)
         Human
```

셤

ò 음

g

à

셤 ઠ 셤 8

à

ò 셤

Fanger GR;

₹,

P, Retter Albone B;

Fling SP, Hill P, Al

Б, Б,

വ

us-10-687-035-1.rag

```
The invention relates to an isolated 0772P polypeptide, which has the structure fully defined in the specification. The composition containing the polypeptides, polynucleotides, fusion proteins, antibodies, T-cells or antigen presenting calls are useful for stimulating an immune response and treating ovarian cancer. Detecting the presence of the polynucleotides and polypeptides is useful for diagnosing cancer. Ovarian carcinoma cDNAs and protein cDNAs were identified using microarray technology. The present sequence represents a human ovarian carcinoma
                                                                                                                                                                                      New isolated O772P polypeptides and polymucleotides, useful in gene therapy, particularly for treating or diagnosing cancer, e.g. ovarian cancer.
                                                                                                                                                                                                                             Example 2; SEQ ID NO 389; 371pp; English
                                                                                                                                        Algate
Carter
      18-JUN-2001; 2001US-00884441.
                                                                                                                                       , King GE,
Vedvick TS,
                      MITCHAM J L.
KING G E.
ALGATE P A.
FLING S P.
RETTER M W.
FANGER G R.
                                                                                                                                                                    WPI; 2003-532352/50.
                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 696; Conserv
                                                                              REED S G.
VEDVICK T &
CARTER D.
                                                                                                                     ALBONE E.
                                                                                                             HILL P.
                                                                                                                                                                                                                                                                                                                                             Sequence 833 AA;
                                                                                                                                        Mitcham JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             254
                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                               138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          258
                                                                                                (CART/)
(HILL/)
(ALBO/)
                                                                                                                                                  Reed SG,
                                                                                                                                                                                                                                                                                                                                                                                                                        9,
                                                                                                                                                                                                                                                                                                                                                                                                                                           74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  134
                      (MITC/)
(KING/)
(ALGA/)
(FLIN/)
(RETT/)
(PANG/)
(REED/)
                                                                                         (VEDV/)
    g
                                                                                                                                                                                                                                                                                                                                                                                                                                           ጵ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                               133
                                                          137
                                                                                                 197
                                                                                                                    193
                                                                                                                           253
                                                                                                                                                                                                                                                                      PLFQKSSMGPPYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                             317
                                                                                                                                                                                                313
                                                                                                                                                                                                                  377
                                                                                                                                                                                                                                  TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                            GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSBYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                   557
                                                                                                                                                                                                                                                                                                                                                      553
                                                                                                                                                                                                                                                                                                                                                                         617
                                                                                                                                                                                                                                                                                                                                                                                            613
                                                                                                                                                                                                                                                                                                                                                                                                              677
                                                                                                                                                                                                                                                                                                                                                                                                                                  673
                                                                                                                                                                                                                                                                                                                                                                                                                                                     737
                                                       PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPG
                                                                                     VDLLCTYLQPLSGPGLPIKQVFHBLSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                          SRKFNTTERVLOGILRPLFKNTSVGPLYSGCRLTLLRPEKDGRATGVDAICTHRPDPTGP
                                                                                                                 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSERPFTLNFT
                                                                                                                                                                                             VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                       INNIRYMADMGQPGSLKFNITDNVMKHLLSPLPQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                         DKVTTLYKGSQLHDTERFCLVTNLTMDSVLVTVKALFSSNLDPSLVBQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                              WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                       NIEDALNOLFRNSSIKSYFSDCOVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVALYEEF
                      Gaps
                      ö
                                      PTHRSSVSTTSTPGTPTVYLGASKTPASI PGPSAASHLLILFTLNFTI
                      Indels
    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         774
  Score 3663; DB 5;
Pred. No. 2.2e-315;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-NOV-2003 (first entry)
                     696; Conservative
Query Match
Best Local Similarity
Matches 696; Conserv
                                                                                                                                                                         258
                                                                                                                                                                                                               318
                                       14
                                                                           74
                                                                                              138
                                                                                                                134
                                                                                                                                   198
                                                                                                                                                       194
                                                                                                                                                                                            254
                                                                                                                                                                                                                                   314
                                                                                                                                                                                                                                                                                          438
                                                                                                                                                                                                                                                                       374
                                                                                                                                                                                                                                                                                                                                 498
                                                                                                                                                                                                                                                                                                                                                                       558
                                                                                                                                                                                                                                                                                                                                                                                         554
                                                                                                                                                                                                                                                                                                                                                                                                            618
                                                                                                                                                                                                                                                                                                               434
                                                                                                                                                                                                                                                                                                                                                    494
                                                                                                                                                                                                                                                                                                                                                                                                                               614
                                                                                                                                                                                                                                                                                                                                                                                                                                                   678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADA08542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADA08542
                                                      a
                                       ሯ
                                                                                        셤
                                                                                                                                셤
                                                                          ò
                                                                                                           8
                                                                                                                                                      ò
                                                                                                                                                                     셤
                                                                                                                                                                                          ठ
                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ठे
```

```
497
                                                                                                        137
                                                                                                                                          133
                                                                                                                                                                                                                                                 257
                                                                                                                                                                                                                                                                                 253
                                                                                                                                                                                                                                                                                                318 VDLCTYLQPLSGPGLPIKQVFHSLSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 377
                                                                                                                                                                                                                                                                                                                                                                                                                                          378 TPKPATTFLPPLSEATTAMGYHLKTLTLNPTISNLQYSPDMGKGSATFNSTEGVLQHLLR 437
                                                                                                                                                                              197
                                                                                                                                                                                                                193
                                                                                                                                                                                                                                                                                                                                                                                                                     TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLPOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                  VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                557
                                                                        73
                                                                                                                                        SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDALCTHRPDFTGP
                                                                                                                                                                                                                               FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                      SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDFTGP
                                                                                                                                                                                                         GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GVTQLGFYVLDRDSLFINGYAPQNLSIRGBYQINFHIVNWNLSNPDPTSSBYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                              INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                     ö
   Length 833;
                                    Indels
 Score 3663; DB 7;
Pred. No. 2.2e-315;
0; Mismatches 1;
92.9%;
llarity 99.9%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374
                                                                                                                                                                                                                                                                                                                                                                                                                     314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            134
                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
```

human; gene therapy; ovarian cancer; cancer Human ovarian carcinoma antigen 0772P #2.

17-JUL-2001; 2001US-00907969

US2003091580-A1

15-MAY-2003

Homo sapiens

ö

ል

ö

Gaps

; 0

618

a ò

558 554

ద 8 614 678

> g ò g

674 738 ADF08885,

```
samples, and therefore which patients may be in need of restorative therapy. The host cell may also be used as antigens in the production of antibodies against (II) and in assays to identify modulators of (II)'s expression and activity. The anti-(II) antibodies, agonists and antagonists may be used to regulate expression and activity and as diagnostic agents for detecting the presence of (II) in samples (e.g. be immunoassay). This sequence represents a secreted ovarian carcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GVTOLGFYVLDRDSLFINGVAPONLSIRGEVQINFHIVNWNLSNPDFTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DKVTTLYKGSQLHDTFRFCLVTNLTNDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WLGSTYQLVD HVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYERF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                194 INNLRYMADMGQPGSLKFNITDDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                             VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                  14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                         Indels
                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             774
                                                                                                                                                           Score 3663; DB 7;
Pred. No. 2.2e-315;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human ovarian carcinoma polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Z
                                                                                                                                                                 92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADG46172 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                   Query Match
Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-FEB-2004
                                                                                                                                          Sequence 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADG46172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        498
                                                                                                                                                                                                                                                                                                                                                                                                                                                       254
                                                                                                                                                                                                                                                       78
                                                                                                               antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 7
ADG46172
ID ADG4
XX
AC ADG4
XX
XX
DT 26-F
XX
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                 Š
                8888888888
                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention describes nucleic acids (I) and the polypeptides (II) they encode. The nucleic acids (I) may be used for preventing, diagnosing and treating diseases related to their aberrant expression i.e. breast cancers. For example, (I) and (II) may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (II) by expressing inactive proteins or to supplement the patients own production of (II). Additionally, (I) may be used to produce (II), by inserting (I) into a host cell and culturing the cell to express the protein (II). (I) And its complementary sequences may also be used as DNA probes in diagnostic assays to detect and quantitate the presence of similar nucleic acids in
                                                                                                    677
                                                                                                                               673
                                                                                                                                                           737
                                                                         613
                                             617
                   553
                                                                                                                               NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVBQVFLDKTLNASFH
                                 WLGSTYQLVDIHVTENESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                    gene therapy; protein therapy; vaccine; antibody inhibition; breast cancer; restorative therapy; diagnostic agent; immunoassay; secreted ovarian carcinoma antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic acids useful for the prevention, diagnosis and of breast cancer.
                                                                                                                                                                                         LEMTENGTOLONFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                      LEMTENGTQLQNFTLDRSSVLVDGYFPNRNBPLTGNS
                                                                                                                                                                                                                                                                                                                                                                              Secreted ovarian carcinoma antigen segid 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 2; SEQ ID NO 389; 399pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fanger GR,
                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                              833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-00215681.
98US-00316003.
99US-00404879.
2000US-00636801.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-00827271
2001US-00884441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001US-00907969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002US-00198053
                                                                                                                                                                                                                                                                                              ADF08885 standard; protein;
                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bangur CS, Retter MW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2003-897152/82.
N-PSDB; ADF08882.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (CORI-) CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2003124140-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-DEC-1998;
23-JUN-1999;
24-SEP-1999;
17-JUL-2000; 2
10-AUG-2000; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JUL-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                        12-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oncogenic r
```

ADFO8885

ADFO8885

XX
ADFO8885

ADF

493 557 553 617 613 677 673 737

433 497

313

193 257 253 317

133 197

137 73

us-10-687-035-1.rag

```
The invention relates to an isolated polynucleotide comprising a sequence of, a sequence hybridizing under highly stringent conditions to, or having at least 75, or 90% identity to a 849 or 1399 bp, fully defined in
                                                                                                                                                                                       617
                                                                                                                                                                                                                                                                                                              PLPQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                               557
                                                                                                                                                     553
                                                                                                                                                                                                                         613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New ovarian carcinoma polynucleotides, preferably cDNAs, useful for diagnosing, preventing and treating diseases, such as ovarian cancer, and for eliciting humoral and/or cellular immune response.
                                    GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human ovarian carcinoma antigen cDNA 0772P clone 21003 encoded protein.
                                                                                                               498 GVTQLGFYVLDRDSLFINGYAPQNLSIRGRYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                     DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVBQVFLDKTLNASFH
                                                                                                                                                                                                                      554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                          614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           diagnosis, cytostatic, immunostimulant, gene therapy, tumor, ovarian tumor, cancer, carcinoma, antigen.
                                                                                                                                                                                                                                                                                                                                                                710
                                                                                                                                                                                                                                                                                                                                                                                                 774
                                                                                                                                                                                                                                                                                                                                                               674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                    738 LRMTRNGTQLQNFTLDRSSVLVDGYFPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 2; SEQ ID NO 389; 398pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fanger GR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADX17768 standard; protein; 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; 2001US-00827271.
; 2001US-00884441.
; 2001US-00907969.
; 2002US-00198053.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2004US-00860790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-00338933
99US-00404879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-00617747
2000US-00636801
2000US-00667857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Retter MW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2005-151645/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US2005031634-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-JUN-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-JUL-2001;
17-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-APR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-PEB-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-JUN-1999
24-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bangur CS,
                374
                                                                                 434
                                                                                                                                                 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADX17768;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                            셤
                                                                                                                                                                                    셤
                                                                                 ò
                                                                                                                                                 ઠે
                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to human ovarian carcinoma polypeptides, designated 08E or 0772P, and the polynucleotides encoding them. The invention also relates to methods for inhibiting the development of cancer, e.g. ovarian cancer in a patient, methods for stimulating and/or expanding T cells and methods for identifying secreted tumour antigens. The polypeptides, compositions, antibodies to the polypeptides and methods are useful for diagnosing, preventing, treating and monitoring cancer, e.g. ovarian cancer. The composition is particularly useful for stimulating an immune response in patient. This sequence represents a human ovarian carcinoma polypeptide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73
              tumour antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYRENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SKKPNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKOGEATGVDAICTHRPDFTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEBPTLMFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INNLRYWADMGQPGSLKENITDNVMKHLLSPLPQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKOSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INNLRYMADMGOPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated OBE or O772P polypeptides, useful for diagnosing, preventing, treating and monitoring cancer, e.g. ovarian cancer, stimulating the immune response in patient.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 833;
Human; ovarian carcinoma; O8E; ovarian cancer; secreted cytostatic; 0772P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 3663; DB 7;
Pred. No. 2.2e-315;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5; SEQ ID NO 389; 290pp; English.
                                                                                                                                                                                                                17-DEC-1998; 98US-00216003.
23-UNN-1999; 99US-00338333.
24-SEP-1999; 99US-00404879.
17-UUL-2000; 2000US-0061747.
10-AUG-2000; 2000US-00636801.
20-SEP-2000; 2000US-0065881.
                                                                                                                                                              04-APR-2001; 2001US-00827271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 99.9%;
datches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                          Retter MW, Fanger GR;
                                                                                                                                                                                                                                                                                                                                         Σ. Ω
Σ. Ω
                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-898035/82
                                                                                             US2003165504-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 833 AA;
                                                                                                                                                                                                                                                                                                                                     (RETT/) RETTER
(PANG/) PANGER
                                                               Homo sapiens
                                                                                                                              04-SEP-2003
                                                                                                                                                                                                17-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
```

a

ð

g

δ

유

δ

ሯ

유

8 8

셤

ò

cytostatic; gene therapy; vaccine.

identification;

```
399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     374
                                                                                                                                                                                                                                                                                                                                                                                                                           279
                                                                                                                                                                                                                                                                                                                                                                                                                                          194
                                                                                                                                                                                                                                                                                                                                                                                                                                                          339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       314
                                                                                                                                                                                                                                                                                                                                                                                                            134
                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                             159
                                                                                                                                                                                                                                                                                                                                                                            74
                                                                                                                                                                                                                                                                                                                                                                                            219
                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                 Mitcham
tumour
                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ጽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                     673
                                                                                                                                                                                                                                                                                                                                                                                                                                    737
                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                        553
                                                                                                                                                                                                                                                                                                                                                                       617
                                                                                                                                                                                                                                                                                                                                                                                       613
                                                                                                                                                                                                                                                                                                                                                                                                     677
                                                                                                                                                                                                                                                             373
                                                                                                                                                                                                                                                                           437
                                                                                                                                                                                                                                                                                           433
                                                                                                                                                                                                                                                                                                    GVTQLGFYVLDRDSLPINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSBYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                     313
                                                                                                                                                                                                                                             377
                                                                                                                                                                 193
                                                                                                                                                                               257
                                                                                                                                                                                                253
                                                                                                                                                                                                             317
                                                                                                                 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENNMPG 137
                                                                                                                                  133
                                                                                                                                          73
 the specification, its complement or degenerate variants, or a sequence of at least 20 contiguous residues of the 849 or 1399 bp sequence. The polynucleotides and polypeptides are useful for diagnosing, preventing and treating diseases, such as ovarian cancer, and for eliciting humoral and/or cellular immune response. This sequence corresponds to an ovarian carcinoma antigen protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                     NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                        DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASPH
                                                                                                                                                                                                                                                                                                                                                                 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                  HIGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                             GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                               INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGABTR
                                                                                                                                                                                                       VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                         TPKPATTFLPPLSBATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                      PLPQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                 SRKFNTTERVLOGILRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                         FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLLLLFTLNFTITNLRYEENMWPG
                                                                                     Gaps
                                                                                     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human ovarian carcinoma antigen 0772P protein SEQ ID NO:312
                                                                       833;
                                                                                     Indels
                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                     710
                                                                      Score 3663; DB 9;
Pred. No. 2.2e-315;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Z
                                                                       92.9%;
99.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB12552 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                        696; Conservative
                                                                                Local Similarity
                                                          Sequence 833 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                         618
                                                                                                                                                                                                                                                                                                                                                                                                                         614
                                                                                                                                                                                                                                                                                                                                                                                                                                                       674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB12552
                                                                                                                                                                                                                                                                                                                                                                                                                                        678
                                                                                                                                                                                                                                                                                                                                                                                          554
                                                                                                                                     74
                                                                                                                                                                                   198
                                                                                                                                                                                                                                                 318
                                                                                                                                                                                                                                                                                378
                                                                                                                                                                                                                                                                                                              438
                                                                                                                                                                                                                                                                                                                             434
                                                                                                                                                                                                                                                                                                                                            498
                                                                                                                                                                                                                                                                                                                                                            494
                                                                                                                                                                                                                                                                                                                                                                          558
                                                                                                                                                     138
                                                                                                                                                                    134
                                                                                                                                                                                                   194
                                                                                                                                                                                                                  258
                                                                                                                                                                                                                                  254
                                                                                                                                                                                                                                                                 314
                                                                                                       14
                                                                         Query Match
                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB12552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5×5×5×5×5×5
                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                             8 6
                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                             ď
                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                             8 8
                                                                                                                                                                                셤
                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                  ઠે
    888888888
                                                                                                        8
                                                                                                                   셤
                                                                                                                                     ઠે
                                                                                                                                                  셤
                                                                                                                                                                    Š
```

ovarian carcinoma; ovarian cancer; therapy; diagnosis;

Human;

```
578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           434 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       433
                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes an isolated polypeptide comprising an immunogenic portion of an ovarian carcinoma protein (or its variants). Ovarian carcinoma proteins, and polypucleotides encoding them, have cytostatic activity and can be used in gene therapy and vaccines. Ovarian carcinoma polypeptides, nucleic acids, antibodies and vaccines are useful for the prevention, diagnosis and treatment of cancer, preferably ovarian cancer. AAA69691 to AAA70077 and AAB12552 to AAB12557 represent human everain carcinoma polymucleotides and proteins used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               73
                                                                                                                                                                                                                                                                                                                                                       acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SRKFNTTERVLØGLLRPLPKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNBPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                       nucleic
                                                                                                                                                                                                                                                                                                                                                    Immunogenic portion of an ovarian carcinoma protein and the nucleic encoding it, useful for the diagnosis, prevention and treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 3663; DB 3;
Pred. No. 2.5e-315;
0; Mismatches 1;
                                                                                                                                                                                                                                                                  Ë
                                                                                                                                                                                                                                                                    Frudakis
                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 2; Page 172-174; 299pp; English
                                                                                                                                                                                                                                                                    PA,
                                                                                                                                                                                                                                                                                                                                                                                               cancer, preferably ovarian cancer
                                                                                                                                                                                                                                                                      Algate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92.9%;
                                                                                                                                        98US-00215681.
98US-00216003.
99US-00338933.
99US-00404879.
                                                                                                      99WO-US030270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                      King GE,
                                                                                                                                                                                                                                                                                                          2000-431589/37
                                                                                                                                                                                                                                     (CORI-) CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
Matches 696; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 914 AA;
                                                                                                                                                                                                                                                                                                                             N-PSDB; AAA70001
                                    WO200036107-A2
Homo sapiens
                                                                                                        17-DEC-1999;
                                                                                                                                                                                                 24-SEP-1999;
                                                                                                                                                                                                                                                                        Ĥ,
                                                                                                                                            17-DEC-1998;
17-DEC-1998;
                                                                      22-JUN-2000
                                                                                                                                                                              23-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
```

ö

á

g

셤 ŝ g

ઠે

셤

ò 용

ઠે

```
614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                218
                                                            133
                                                                                      278
                                                                                                                                           338
                                                                                                                                                                                                398
                                                                                                               GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBPFTLNFT 193
                                                                                                                                                                                                                           313
                                                                                                                                                                                                                                                                                              493
                                                                                                                                                                                                                                                                                                                                                                                                           579 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIG 638
                                                                                                                                                                      253
                                                                                                                                                                                                                                         VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 458
                                                                                                                                                                                                                                                                                  373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 639 DKVTTLYKGSQLHDIFRFCLVTNLINDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      554 WLGSTYQLVDIHVTEMESSVXQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    758
                                                                                                                                                                                                                                                                                                                                     433
                                                                                                                                                                                                                                                                                                                                                    PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 578
                                                                                                                                                                                                                                                                                                                                                                                                                                                  DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
       73
                     219 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                            SRKFNTTERVLOGILRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                            SRKPNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKOGGATCVDAICTHRPDPTGP
                                                                                                                                                                                                                           VOLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
       FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLL1LFTLNFT1TNLRYEENWWPG
                                                                                                                                                                      INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGABTR
                                                                                                                                                                                   339 INNIRYWADMGQPGSLKENITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               759 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                     PLPQKSSMGPFYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                            434 GVTQLGPYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             immunostimulant; cytostatic; cancer; ovarian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LAMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LRMTRNGTOLONFILDRSSVLVDGYFPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hypothetical protein sequence for clone 0772P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABP30968 standard; protein; 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-JUL-2000; 2000US-00617747.
10-MG-2000; 2000US-00636801.
20-SEP-2000; 2000US-00657857.
04-APR-2001; 2001US-00827271.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-JUL-2001; 2001WO-US022635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200206317-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-JAN-2002
       14
                                159
                                                         74
                                                                                    219
                                                                                                               134
                                                                                                                                                                    194
                                                                                                                                                                                                                          254
                                                                                                                                                                                                                                                     399
                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                                                                                     374
                                                                                                                                                                                                                                                                                                                                                                519
                                                                                                                                                                                                                                                                                                                                                                                                                                                  494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABP30968;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  名
                                                          δ
                                                                              g
                                                                                                        ઠે
                                                                                                                                      g
                                                                                                                                                                    8
                                                                                                                                                                                         셤
                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                             553
                                                                       698
                                                                                                  613
                                                                                                                           758
                                                                                                                                                        673
                                                                                                                                                                                 818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention relates to human breast tumour protein coding sequences (see AAH55479-AAH55513, AAH55517-AAH55679 and AAH55682-AAH55762). The breast tumour protein DNA sequences may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate expression of the breast tumour protein e.g. breast cancer. The present sequence is a human ovarian tumour-derived antigen, which was used in an example from the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                    Cytostatic; human; breast tumour protein; breast cancer; ovarian tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        them, useful
WIGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPVSQDKAQPGTTNYQRNKR
                                                            DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALPSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                  WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                         DKVTTLYKGSQLHDTPRRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVPLDKTLNASFH
                                                                                                                                                     NI EDALNQLPRNSSIKSYPSDCQVSTPRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                    NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNPSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wang A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Breast tumor polypeptides and the nucleic acids that encode t
for the prevention, diagnosis and treatment of breast cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Houghton RL, Mitcham JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                           LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                        LEMIRAGIOLONFILDRSSVLVDGYPPNRNEPLIGNS 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 3663; DB 4;
Pred. No. 2.5e-315;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                         ovarian tumour-derived antigen 0772P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 3; Page 187-188; 221pp; English.
                                                                                                                                                                                                                                                                                                          standard; protein; 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jiang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-NOV-1999; 99US-00451651.
22-FEB-2000; 2000US-00510662.
10-MAR-2000; 2000US-0053386.
07-APR-2000; 2000US-00545068.
15-MAY-2000; 2000US-00571025.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-NOV-2000; 2000WO-US032520
                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 99.5
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Day CH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (CORI-) CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-356154/37.
N-PSDB; AAH55680.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 914 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                 antigen; 0772P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200140269-A2
                                                                                                                                                                                                                                                                                                                                                              04-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dillon DC,
                                                                    639
                                                                                                554
                                                                                                                         669
                                                                                                                                                                               759
                                                                                                                                                                                                          674
                                           494
                                                                                                                                                   614
                                                                                                                                                                                                                                    819
                                                                                                                                                                                                                                                                                                        AAB99203
                                                                                                                                                                                                                                                                                                                                  AAB99203
                                                                                                                                                                                                                                                                                                                                                                                         Human
```

:

```
N-PSDB; ABN72895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 914 AA;
                                                                                                                                                                                                                               WO200206317-A2
                                                                                                                                                         0772P protein
                                                                                                                                                                                                                                                                                                                                   04-APR-2001;
18-JUN-2001;
                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                    17-JUL-2000;
                                                                                                                                                                                                                                                                                                            10-AUG-2000;
                                                                                                                                  02-JUL-2002
                                                                                                                                                                                                                                                      24-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     279
                                                                                                                                                                                                                                                                                                                                                                                                        Reed SG,
                                                                                                           ABP30896;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example
                                                                RESULT 12
                                                                             ABP30896
                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               493
                                                                                                                                                                                                                                                                                                                                                                                                                                                         253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKOSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 433
                                                                                                                                                                                                                                                                                                                                                                      218
                                                                                                                                                                                This invention relates to polypeptides comprising an immunogenic portion of an ovarian carcinoma protein which acts as an immunostimulant and is cytostatic. The polypeptides, polymuleotides, antibodies, fusion proteins, T cell populations and antigen presenting cells that express the polypeptides are useful for stimulating an immune response in a patient and treating ovarian cancer. This sequence represents protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHDDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIEDALNQLFRNSSIKSYFSDCOVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  carcinoma
                                                                                                                                                                                                                                                                                                                                                                   FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                            INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWBLSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSRYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                           GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                              Polypeptides comprising an immunogenic portion of an ovarian carcinoma protein or its variants, useful for stimulating an immune response in patient and treating ovarian cancer.
                                                                                                                                                                                                                                                                                                                                                  FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMMPG
                                                                                                                                                                                                                                                                                                                                                                                                SRKFNTTERVLOGILIRPLFKNTSVGPLYSGCRLTLLRPBKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                           Gaps
                                           g,
                                           Fanger
                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                     Length 914;
                                           Fling SP, Retter MW,
Hill P, Albone E;
                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                      Score 3663; DB 5;
Pred. No. 2.5e-315;
                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                            Disclosure; Page 350-352; 408pp; English
                                            PA,
D,
                                            Algate
Carter
                                                                                                                                                                                                                                                                                                    92.9%;
18-JUN-2001; 2001US-0088441
                                                                                                                                                                                                                                                                                                                  Local Similarity 99.9
                                                                                                                                                                                                                                                          related to the invention
                                              B,S
                        (CORI-) CORIXA CORP.
                                                                               2002-164781/21
                                            JL, King (
                                                                                                                                                                                                                                                                                 Sequence 914 AA;
                                                                                          N-PSDB; ABN72974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               459
                                              Mitcham JI
Reed SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374
                                                                                                                                                                                                                                                                                                                                                     14
                                                                                                                                                                                                                                                                                                                                                                                                 74
                                                                                                                                                                                                                                                                                                                                                                                                                        219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      279
                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                      Best Loca
Matches
```

셤

ઠે

a ò 셤 ठे

ઠે

```
GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This invention relates to polypeptides comprising an immunogenic portion of an ovarian carcinoma protein which acts as an immunostimulant and is cytostatic. The polypeptides, polynucleotides, antibodies, fusion proteins, T cell populations and antigen presenting cells that express the polypeptides are useful for stimulating an immune response in a patient and treating ovarian cancer. This sequence represents protein related to the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBFFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Polypeptides comprising an immunogenic portion of an ovarian carcinoma protein or its variants, useful for stimulating an immune response in spatient and treating ovarian cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SRKFNTTERVLQGLLRPLFRANTSVGPLYSGCRLTLLRPEKDGEATGVDALCTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fanger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                    Human; immunostimulant; cytostatic; cancer; ovarian carcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Œ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fling SP, Retter
Hill P, Albone E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 3663; DB 5;
Pred. No. 2.5e-315;
0; Mismatches 1;
                            819 LAMTRNGTQLQNFTLDRSSVLVDGYFPNRNEPLTGNS
674 LEMTRNGTOLONFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Page 291; 408pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Algate PA,
Carter D, 1
                                                                                                                                                                         Æ
                                                                                                                                                                         914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-00636801.
2000US-00667857.
2001US-00827271.
2001US-00884441.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92.9%;
Best Local Similarity 99.9%;
Matches 696; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JUL-2001; 2001WO-US022635
                                                                                                                                                                      ABP30896 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mitcham JL, King GE,
Reed SG, Vedvick TS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-164781/21.
                                                                                                                                                                                                                                                                          (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CORI-) CORIXA CORP
```

ö

ద

영 중

ద

쉱 ठ

8

임

ò

요 δ 셤 ò

ò

338

```
%XCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCXXXXAAAXXAAAX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . A
313
                                                                                                                                                                                                                                             PLFQKSSMGPFYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 578
                                                                                                                                                                                                                                                                                                  GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                               GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 638
                                                                                                                                                                                                                                                                                                                                                                                                      DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 698
                                                                                                                                                                                                                                                                                                                                                                                                                                                           613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            458
                                                                                                                                    314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                    PLPOKSSMGPPYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                              DKVTTLYKGSQLHDTPRFCLVTNLTMDSVLVTVKALPSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                699 WLGSTYOLVDIHVTEMESSVYOPTSSSSTOHFYLNFTITNLPYSODKAOPGTTNYORNKR 758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       673
                                                                                 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                               TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                         WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIEDALNQL FRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                             VDLLCTYLQPLSGPGLP1KQVFHELSQQTHG1TRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cytostatic; gene therapy; vaccine; breast cancer; cancer; tumour; immune response; 08E; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Breast cancer associated polypeptide seqid 206.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADU01425 standard; protein; 914 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-NOV-1999; 99US-00451651.
22-FEB-2000; 2000US-00510662.
10-WAR-2000; 2000US-00523586.
07-APR-2000; 2000US-00545689.
15-WAY-2000; 2000US-00571025.
06-FEB-2001; 2001US-00778320.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-JUL-2001; 2001US-00910689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-DEC-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HOUGHTON R L.
MITCHAM J L.
WANG T.
MCNEILL P D.
HARLOCKER S L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DILLON D C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DAY C H.
JIANG Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US2002081609-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-JUN-2002.
                                                                                                                                                                                                                                                                                                                                       579
                                                                                                                                                                                                                                                                                                                                                                                                                   639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        819
                                                                                                  399
                                                                                                                                                                           459
                                                                                                                                                                                                                                                         519
                                                                                                                                                                                                                                                                                                                                                                                                                                                         554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADU01425;
                      339
                                                           254
                                                                                                                                                                                                                    374
                                                                                                                                                                                                                                                                                                434
                                                                                                                                                                                                                                                                                                                                                                              494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (DILL/)
(DAYC/)
(JIAN/)
(HOUG/)
(MITC/)
(WANG/)
(MCNE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
ADU01425
ID ADU01425
AC ADU01
XX ADU017
DT 30-DE
XX CYLOR
XX CYLOR
XX CYLOR
XX HOMO

                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                       셤
                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                           ò
                                                                                                                                  ઠે
                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
```

```
The invention describes an isolated breast cancer polymucleotide (I) comprising a sequence (SI) selected from the 249 mucleotide sequence (CI) fully defined in the specification, complements of SI, a sequence having the comprising at least 20 contiguous residues of SI, a sequence that the specification, complements of SI, ander moderately stringent conditions, a sequence having at least 75%, preferably 90% identity to SI, or degenerate variants of SI. Also described are: an isolated polypeptide (II) encoded by (I), or expression vector (III); a host cell (IV) transformed or transfected with certain isolated antibody (Ab) that specifically binds to (II); an isolated antibody (Ab) that specifically binds to (II); detecting (MI) the presence of cancer in a patient; a fusion protein (V) comprising (III); an oligonucleotide (VI) that hybridies to SI; detecting (MI) the presence of cancer in a patient. (CI) is an inhibiting (MI) the development, and a second component selected from (II), (III) and antispon presenting cells that express (III); and inhibiting (MI) the development of a cancer in a patient. (VI) is an eaful for determining the presence of cancer in a patient, by obtaining a biological sample from the patient, or or and inhibiting cells that bind to the antibody that binds to OBE, isolating cells that bind to the antibody that binds to OBE, isolating polymucleotides with (VI), is useful for the oligomucleotide, and comparing the amount of polymucleotides with (VI), is useful in the design and preparation of ribozyme cut-off value, and thus determining the presence of cancer in the presence of cancer in the development of breast cancer. (C) is useful for inhibiting the development of breast cancer in a patient, and for removing twour cells from a biological sample of the tumour polypeptides and cut-off value, and thus determining the presence of cancer in the presence of cancer in the presence of cancer in a patient. (I) is useful for detecting the presence of cancer in a patient. (I) is useful for detecti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             254 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                159 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILPTLNPTITNLRYEENNWPG 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBPFTLNFT 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                          Novel breast cancer polynucleotides and polypeptides encoded by the polynucleotides, useful for detecting the presence of breast cancer in patient, and in pharmaceutical compositions, for treating breast cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14 PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
        Mitcham JL, Wang T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 3663; DB 5;
Pred. No. 2.5e-315;
0; Mismatches 1;
Day CH, Jiang Y, Houghton, RL,
Harlocker SL;
                                                                                                                                                                                                                                                                                                                                                                                                         Claim 2; SEQ ID NO 206; 159pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92.9%;
il Similarity 99.9%;
696; Conservative
                                                                                                                         WPI; 2002-657500/70
                                                                                                                                                                       N-PSDB; ADU01424.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 914 AA;
        Dillon DC,
Mcneill PD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Si
Matches 696
```

```
용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                      578
                                                                                                                         553
                                                                                                                                           698
                                                                                                                                                             613
                                                                                                                                                                                               673
                                                                                                                                                                                                               818
                                                                                       GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel breast cancer polynucleotides and polypeptides encoded by the polynucleotides, useful for detecting the presence of breast cancer in patient, and in pharmaceutical compositions, for treating breast cancer.
                           TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                              PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGFGLDIQQLYWELSQLTH
                                                                                                 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFTSSEYITLLRDIQ
                                                                                                                                    WIGSTYQLVDIHVTEMESSYYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                             WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                       TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                    PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                         DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                 cytostatic; gene therapy; vaccine; diagnosis; pharmaceutical; cancer; neoplasm; breast tumor; endocrine disease; gynecology and obstetrics.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wang T;
Fanger GR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mitcham JL,
Zehentner B,
                                                                                                                                                                                                                                                                                                                                                  Human breast cancer associated protein SEQ ID NO 206.
                                                                                                                                                                                                                                 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                          Y, Houghton RL,
Bennington AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 2; SEQ ID NO 206; 237pp; English.
                                                                                                                                                                                                                                                                                              ADZ41689 standard; protein; 914 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-FEB-2001; 2001US-00778320.
20-JUL-2001; 2001US-00910689.
30-NOV-2001; 2001US-00010742.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-FEB-2002; 2002WO-US003332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Day CH, Jiang
Harlocker SL,
                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-657500/70.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; ADZ41688.
                                                                                                                                                                                                                                                                                                                                                                                                              WO200262203-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dillon DC, I
Mcneill PD,
Retter MW;
                                                                                                                                                                                                                                                                                                                                 16-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                              15-AUG-2002.
                                                                                                                                                                                                               759
                  314
                                                     374
                                                                                                                          494
                                                                                                                                           639
                                                                                                                                                             554
                                                                                                                                                                              669
                                                                                                                                                                                                                                                                                                               ADZ41689;
                                    459
                                                                      519
                                                                                       434
                                                                                                         579
                                                                                                                                                                                                                                 674
                                                                                                                                                                                                                                                                                                                                                                                              Ношо
                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                           8
                                                                                                                                                                                                                                ઠ
                                 요
                                                    à
                                                                셤
                                                                                  ઠે
                                                                                                   g
                                                                                                                         ò
                                                                                                                                      셤
                                                                                                                                                      ઠે
                                                                                                                                                                                               ò
                                                                                                                                                                                                                                              셤
               ठ
```

The invention describes an isolated breast cancer polynucleotide (I) comprising a sequence (SI) selected from the 249 nucleotide sequences

```
cully defined in the specification, complements of S1, a sequence

comprising at least 20 contiguous residues of S1, a sequence that

thybridize to S1, under moderately stringent conditions, a sequence having

at least 75*, preferably 90* identity to S1, or degenerate variants of

S1. Also described are: an isolated polypeptide (IT) comprising a

sequence (S2) selected from any one of the 11 sequences mentioned in the

S1. Also described are: an isolated polypeptide (IT) comprising a

comprising (I), operably linked to an expression control sequence; a host

CC omprising (I), operably linked to an expression control sequence; a

comprising (II); an oligonacleotide (VI) that hybridizes to S1;

detecting (MI) the presence of cancer in a patient, a fusion protein (VI)

comprising (II); an oligonacleotide (VI) that hybridizes to S1;

comprising (II); an oligonacleotide (VI) that hybridizes to S1;

stimulating and/or expanding (M2) T cells specific for a tunor protein;

comprising (II); an oligonacleotide (VI) that hybridizes to S1;

stimulating and/or expanding (M2) T cells specific for a tunor protein;

comprising (II); an oligonacleotide (VI) that hybridizes to S1;

a diagnostic Kit (VIII) comprising T cells prepared by (M2);

a composition (C) comprising physiologically acceptable carriers and

funnomerimilating as first component, and a second component cell

comprising a reporter group; and inhibiting (M3) the development of a

comprising a reporter group; and inhibiting (M3) the development of a

comprising a reporter group; and inhibiting (M3) the development of a

comprising a patient, by incubating CD4 and/or CD6;

conter in a patient, by incubating the development of a cancer in the patient. The following are disclosed;

compositions comprising and research of cancer in a patient. (I) is useful for tending the development of a cancer in a patient, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              374 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SRKFNTTERVLQGLLRPLFKNTSVGPLYSGGRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SRKFNTTERVLOGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92.9%; Score 3663; DB 5;
99.9%; Pred. No. 2.5e-315;
iive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . . 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 914 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity Matches 696;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

Ovarian

ö

Gaps

218

73

133 278 193 338 253 398 313 373 518

458

578

493

433

638 553 698 613 673 818

> ٠.' .

us-10-687-035-1.rag

8 8

8

셤

g ઠે g

ઠે

g

ò

```
699 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 758
and treating ovarian cancer. Detecting the presence of the polynucleotides and polypeptides is useful for diagnosing cancer. Ovar carcinoma cDNAs and protein cDNAs were identified using microarray technology. The present sequence represents a human ovarian carcinoma.
                                                                                                                                                                                                         159 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYERNWWPG
                                                                                                                                                                                                                                                                                                                                  279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                              339 INNLRYMADMGQPGSLKENITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  639 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVRQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14 PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPG
                                                                                                                                                                                                                                                     SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGBATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                     219 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGBATGVDAICTHRPDFTGP
                                                                                                                                                                                                                                                                                                                 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                              194 INNLRYMADMGQPGSLKFNITDNVWRGHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                          VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                              399 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PLPQKSSMGPFYLGCQLISLRPBKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 519 PLPOKSSMGPFYLGCOLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQOLYWELSOLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GVTQLGPYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIEDALNQLPRNSSIKSYPSDCQVSTPRSVPNRHHTGVDSLCNPSPLARRVDRVAIYEEP
                                                                                                                                                          ö
                                                                                                                           Length 914;
                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  855
                                                                                                                         Score 3663; DB 7;
Pred. No. 2.5e-315;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LEMITRIGITOLONFILDRSSVIVDGYSPNRNEPLIGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human; gene therapy; ovarian cancer; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human ovarian carcinoma antigen 0772P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADA08465 standard; protein; 914
                                                                                                                           92.94;
                                                                                                                                                          696; Conservative
                                                                                                                                         Similarity
                                                                                              Sequence 914 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-NOV-2003
                                                                                                                         Query Match
Best Local S:
Matches 696
                                                                                                                                                                                                                                                                                                                                                                                                                                            254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  819
                                                                                                                                                                                                                                                   74
                                                                                                                                                                                                                                                                                                                 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADA08465
                                                                antigen.
 88888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *****
                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                          윰
                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                   818
                   578
                                                493
                                                                               638
                                                                                                           553
                                                                                                                                        698
                                                                                                                                                                        613
                                                                                                                                                                                                     758
                                                                                                                                                                                                                                    673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated 0772P polypeptide, which has the structure fully defined in the specification. The composition containing the polypeptides, polynucleotides, fusion proteins, antibodies, T-calls or antigen presenting cells are useful for stimulating an immune response
GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFTSSEYITLLRDIQ
                                                                                                                                                                                         WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                            DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                      NI EDALMOLFRNSSIKSYFSDCOVSTFRSVPNRHHTGVDSLCNFSFLARRVDRVAIYEEF
                                                GVTQLGPYVLDRDSLPINGYAPQNLSIRGBYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                        WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                    NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New isolated 0772P polypeptides and polymucleotides, useful in gene therapy, particularly for treating or diagnosing cancer, e.g. ovarian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fanger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fling SP, Retter
Hill P, Albone E;
                                                                                                                                                                                                                                                                                                                  LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNBPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 13; SEQ ID NO 478; 371pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human; gene therapy; ovarian cancer;
                                                                                                                                                                                                                                                                                                                                                                                                               ż
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PA,
0
                                                                                                                                                                                                                                                                                                                                                                                                             914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Algate
Carter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-JUL-2001; 2001US-00907969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JUN-2001; 2001US-0088441
                                                                                                                                                                                                                                                                                                                                                                                                             standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FLING S P.
RETTER M W.
FANGER G R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human 0772P partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MITCHAM J L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KING G E.
ALGATE P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-532352/50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . G.
H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  L, King (
Vedvick '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARTER D.
HILL P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REED S G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALBONE E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US2003091580-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-MAY-2003
                                                                                                                                                                                                     669
                                                                                                                                                                                                                                                                  759
                 519
                                                434
                                                                            579
                                                                                                           494
                                                                                                                                         639
                                                                                                                                                                       554
                                                                                                                                                                                                                                    614
                                                                                                                                                                                                                                                                                                674
                                                                                                                                                                                                                                                                                                                              819
                                                                                                                                                                                                                                                                                                                                                                                                             ADA08631
                                                                                                                                                                                                                                                                                                                                                                                                                                          ADA08631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MITC/)
(KING/)
(ALGA/)
(FLIN/)
(RETT/)
(FANG/)
(REED/)
(VEDV/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mitcham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HILL/)
(ALBO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cancer
```

433

```
The invention describes nucleic acids (I) and the polypeptides (II) they encode. The nucleic acids (I) may be used for preventing, diagnosing and treating diseases related to their aberrant expression i.e. breast
                                                                                                                                                                                     DXVTTLYKGSQLHDTRRPCLVTNLTMDSVLVTVKALRSSNLDPSLVEQVFLDKTLANSFH
                                                                                                                                           PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                          519 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                  GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                  gene therapy, protein therapy, vaccine; antibody inhibition; breast cancer; restorative therapy; diagnostic agent; immunoassay; secreted ovarian carcinoma antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oncogenic nucleic acids useful for the prevention, diagnosis and treatment of breast cancer.
                                                                                                                                                                                                                                                                                                               710
                                                                                                                                                                                                                                                                                                                             LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Secreted ovarian carcinoma antigen seqid 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 13; SEQ ID NO 478; 399pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H111
                                                                                                                                                                                                                                                                                                                                                                                                                         Ŕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fanger GR,
                                                                                                                                                                                                                                                                                                                                                                                                                           ADF08974 standard; protein; 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             980S-00215681.

980S-00216003.

990S-0038933.

990S-00404879.

2000US-0061747.

2000US-0065801.

2000US-0067857.

2001US-0082721.

2001US-0084441.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002US-00198053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Retter MW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (CORI-) CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-897152/82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US2003124140-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-JUL-2000;
10-AUG-2000;
20-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-APR-2001;
18-JUN-2001;
17-JUL-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-DEC-1998;
17-DEC-1998;
23-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-JUL-2003
                                                                                                  579 (
                                                                                                                               494
                                                                                                                                                           639
                                                                                                                                                                                                                                                                                                                                                819
                                                                     434
                                                                                                                                                                                                                                                                                                                  674
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADF08974;
                                                                                                                                                                                                                                                                                                                                                                                           RESULT 17
                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                  음
                                                                                                                                                           g
                                                                                                                                                                                         ò
                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                          셤
                                                                    ò
                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to an isolated 0772P polypeptide, which has the structure fully defined in the specification. The composition containing the polypeptides, polynucleotides, fusion proteins, antibodies, T-cells or antigen presenting cells are useful for stimulating an immune response and treating ovarian cancer. Detecting the presence of the polynucleotides and polypeptides is useful for disgnosing cancer. Ovarian carcinoma cDNAs and protein cDNAs were identified using microarray technology. The present sequence represents a human ovarian carcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SRKFWTTERVLQGLLRPLFRNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBFFTLNFT 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGPTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TPKPATTF1.PPLSEATTAMGYHLKTLT1.NFT1.SNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              459 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTINTLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated 0772P polypeptides and polymucleotides, useful in gene therapy, particularly for treating or diagnosing cancer, e.g. ovarian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                  Fanger GR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ch 92.9%; Score 3663; DB 7; Length 9 11 Similarity 99.9%; Pred. No. 2.5e-315; 696; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                   Fling SP, Retter MW,
Hill P, Albone E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 2; SEQ ID NO 312; 371pp; English.
                                                                                                                                                                                                                                                                                                                                   Algate PA,
Carter D,
                                                                                       17-JUL-2001; 2001US-00907969
                                                                                                                   18-JUN-2001; 2001US-0088441
                                                                                                                                                             KING G E.
ALGATE P A.
FLING S P.
FANGER G R.
REED S G.
VEDVICK T S.
HILL P.
                                                                                                                                                                                                                                                                                                                                   Mitcham JL, King GE,
Reed SG, Vedvick TS,
                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-532352/50.
N-PSDB; ADA09060.
                                                                                                                                                  MITCHAM J L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 914 AA;
                          US2003091580-A1
                                                                                                                                                                                                                                                                                                     ALBONE
Homo sapiens
                                                         15-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                       (VEDV/)
(CART/)
(HILL/)
(ALBO/)
                                                                                                                                                              (KING/)
(ALGA/)
(FLIN/)
(RETT/)
(FANG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loca
Matches
```

쉽

ઠ

셤 ò

8

g

셤 ò 셤 કે ġ

standard; protein; 914

(first entry)

12-FEB-2004

```
cancers. For example, (I) and (II) may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (II) by expressing inactive proteins or to supplement the patients own production of (II). Additionally, (I) may be used to produce (II), by inserting (I) into a complementary sequences may also be used as DNA probes in diagnostic assays to detect and quantitate the presence of similar nucleic acids in camples, and therefore which patients may be in need of restorative therapy. The host call may also be used as antigens in the production of antibodies against (II) and in assays to identify modulators of (II)'s expression and activity. The anti-(II) antibodies, agonists and activity. The anti-(II) antibodies, agonists and all and activity and as antigen in and activity and as expression and activity and as contain and activity and as a diagnostic agents for detecting the presence of (II) in samples (e.g. by antibodies).
```

Sequence 914 AA;

a

g ò

ò 셤 ઠે 셤 ò 셤 ò 셤 ò 셤 ઠે 셤 ઠ 셤 8 셤 ઠે

```
218
                                                                                                                                                                                                                      278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                818
                                                                                                                                                                             133
                                                                                                                                                                                                                                                                                                              338
                                                                                                                                                                                                                                                                                                                                                                                                 398
                                                                                                                                                                                                                                                                                                                                                                                                                                          313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           519 PLFQKSSMGPFYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                      INNLRYMADMGQPGSLKFNITDNVMRHLLSPLFQRSSLGARYTGCRVIALRSVRNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                              FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMMPG
                                                                                                                                                                                                    SRKFWITERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDALCTHRPDPTGP
                                                                                                                                                                                                                                                                                          GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                               INNLKYMADMGQPGSLKENITDNVMKHLLSPLPQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEFF
                                                                                                                                                                             SRKFNTTERVLOGLLRPLFKNTSVGPLYSGCRLTLLRPBKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                          VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WLGSTYQLVDIHVTEMESSVYQPTSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                       FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                             Gaps
                                             .;
0
92.9%; Score 3663; DB 7; Length 914; 99.9%; Pred. No. 2.5e-315; ive 0; Mismatches 1; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LEMTENGTOLONFTLDRSSVLVDGYFPNRNEPLTGNS 855
                      Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     639
                                                                                       14
                                                                                                                                                                           74
                                                                                                                                                                                                                                                                                                         279
                                                                                                                                                                                                                                                                                                                                                    194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           674
                                                                                                                                159
                                                                                                                                                                                                                      219
                                                                                                                                                                                                                                                                 134
                                                                                                                                                                                                                                                                                                                                                                                               339
                                                                                                                                                                                                                                                                                                                                                                                                                                          254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  819
  Query Match
```

```
gene therapy; protein therapy; vaccine; antibody inhibition; breast cancer; restorative therapy; diagnostic agent; immunoassay; secreted ovarian carcinoma antigen.
                                                                                                                                                                                                                                                                             Oncogenic nucleic acids useful for the prevention, diagnosis and treatment of breast cancer.
                                                 Secreted ovarian carcinoma antigen seqid 312.
                                                                                                                                                                                                                                           Hill P;
                                                                                                                                                                                                                                           Fanger GR,
                                                                                                                                                98US-00215681.
98US-00216003.
99US-00318933.
99US-00404879.
2000US-00617747.
                                                                                                                                                                                          2000US-00667857.
2001US-00827271.
2001US-00884441.
                                                                                                                                   17-JUL-2002; 2002US-00198053
                                                                                                                                                                                                               2001US-00907969
                                                                                                                                                                                                                                           Retter MW,
                                                                                                                                                                                                                                                        WPI; 2003-897152/82.
N-PSDB; ADF08807.
                                                                                                                                                                                                                              (CORI-) CORIXA CORP.
                                                                                                        US2003124140-A1.
                                                                                            Homo sapiens.
                                                                                                                                                                                     10-AUG-2000;
                                                                                                                                                                                           20-SEP-2000;
                                                                                                                                                                                                   04-APR-2001;
18-JUN-2001;
                                                                                                                                                                                                               17-JUL-2001;
                                                                                                                                                                                                                                           Bangur CS,
                                                                                                                      03-JUL-2003
                                                                                                                                                              23-JUN-1999
```

Example 2; SEQ ID NO 312; 399pp; English.

The invention describes nucleic acids (I) and the polypeptides (II) they encode. The nucleic acids (I) may be used for preventing, diagnosing and creates are seasons related to their aberrant expression i.e. breast cancers. For example, (I) and (II) may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a partient's genome that affect the activity of (II) by expressing inactive proteins or to supplement the patients own production of (II). Additionally, (I) may be used to produce (II), by inserting (I) into a Additionally, (I) may be used to produce (II), by inserting (I) into a complementary sequences may also be used as DNA probes in diagnostic assays to detect and quantitate the presence of similar nucleic acids in easily. The host cell may also be used as antigens in the production of antibodies against (II) and in assays to identify modulators of (II)'s expression and activity. The anti-(II) antibodies, gaonists and assays to require expression and activity and as antigenestic agents for detecting the presence of (II) in samples (e.g. by immunoassay). This sequence represents a secreted ovarian carcinoma

Sequence 914 AA;

```
ö
 Length 914;
                           Indele
Score 3663; DB 7;
Pred. No. 2.5e-315;
0; Mismatches 1;
  92.9%;
  Query Match
Best Local Similarity 99.9
Matches 696; Conservative
```

g ò

g

ò

```
The invention relates to human ovarian carcinoma polypeptides, designated OBE or 0772P, and the polymucleotides encoding them. The invention also relates to methods for inhibiting the development of cancer, e.g. ovarian cancer in a patient, methods for stimulating and/or expanding T cells and methods for identifying secreted tumour antigens. The polypeptides, compositions, antibodies to the polypeptides and methods are useful for diagnosing, preventing, treating and monitoring cancer, e.g. ovarian cancer. The composition is particularly useful for stimulating an immune response in patient. This sequence represents a human ovarian carcinoma polypeptide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WIGSTVQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SRKENTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           399 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITHIHIHIHIHIHIHIHIHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLFOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         194 INNIRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                           New isolated OBE or 0772P polypeptides, useful for diagnosing, preventing, treating and monitoring cancer, e.g. ovarian cancer, stimulating the immune response in patient.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92.9%; Score 3663; DB 7; 99.9%; Pred. No. 2.5e-315;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                               Claim 5; SEQ ID NO 312; 290pp; English
20-SEP-2000; 2000US-00667857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 99.9
Matches 696; Conservative
                                                                                               Retter MW, Fanger GR;
                                                                                                                                       WPI; 2003-898035/82
                                                                                                                                                          N-PSDB; ADG46555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 914 AA;
                                     RETTER
FANGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                   (RETT/)
(FANG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            313
                                                                                                                                                                                                                                                                                                      458
                                                                                                                                                                                                                                                                                                                                                                                   518
                                                                                                                                                                                                                                                                                                                                                                                                                          433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             253
                                                                                                                                                                                                                                                                                                                                             TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; ovarian carcinoma; O8E; ovarian cancer; secreted tumour antigen; cytostatic; 0772P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                       SKKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDFTGP
                                                                                                                        GLDREOLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                      VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKOSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                      TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                               INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                VDLLCTYLQPLSGPGLP1KQVFHELSQQTHG1TRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                          PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                  GLOREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LEMTRNGTQLQNFTLDRSSVLVDGYFPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human ovarian carcinoma polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADG46095 standard; protein; 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-DEC-1998; 98US-00215681.
17-DEC-1998; 98US-00216003.
23-UNA-1999; 99US-00338933.
24-SEP-1999; 99US-00404879.
17-UUL-2000; 2000US-00617747.
10-AUG-2000; 2000US-00636801.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001US-00827271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2003165504-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-SEP-2003
                                                            219
                                                                                                                                           279
                                                                                                                                                                                 194
                                                                                                                                                                                                                        339
                                                                                                                                                                                                                                                                                                                                               314
                                                                                                                                                                                                                                                                                                                                                                                                                            374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADG46095
                                                                                                                                                                                                                                                                254
                                                                                                                                                                                                                                                                                                        399
                                                                                                                                                                                                                                                                                                                                                                                       459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 19
ADG46095
XX
AC ADG46
XX
DT 26-FE
XX
DB Human
XX
KW Cytos
XX
KW Cytos
XX
KW Cytos
XX
Cytos
Cy
                                                                                                                                                                                                                                                                                                                                                                          a
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                $ A
                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                    셤
                                                                                                                                 셤
                                                                                                                                                                      ઠે
                                                                                                    8
```

193

253 398 313

278

133

73

ö

Length 914;

458 373 518 433 578 493

638 553 758

159 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG 218

셤

ò

14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG 73

ö

Length 914; Indels

2.5e-315; DB 8;

Score 3663; DI Pred. No. 2.5e-0; Mismatches

92.9%; llarity 99.9%; Conservative

Best Local Similarity Matches 696; Conserv

Query Match

us-10-687-035-1.rag

```
The present invention relates to polymucleotide and polypeptide sequences associated with breast cancer. Also disclosed are expression vectors comprising the polymucleotide sequences of the invention operably linked to an expression control sequence, host cells comprising the vector, antibodies (or antigen binding fragments of antibodies) specifically, binding the polypeptides of the invention, fusion proteins comprising at least one of the polypeptides, stimulating and/or expanding T cells specific for a tumour protein. The polymucleotide sequences, polypeptide specific for a tumour protein. The polymucleotide sequences, polypeptide specific for a tumour protein. The polymucleotide sequences, polypeptide therapeutically/prophlactically to induce an immune response. They can be included with a physiological carrier/immunostimulant in compositions such as vaccines, particularly to treat or prevent cancers such as breast cancer. They can also be used to inhibit the development of cancer by incubating one or more of them with CD4+ and/or CD8+ T cells isolated from a patient, such that the T cells proliferate, and administering the producing one or more of them with CD4+ and/or CD8+ T cells isolated from a patient, such that the T cells proliferate, and administering the useful for detecting cancer in a patient, producing fusion proteins, producing T cell populations and antigen presenting cells. The present sequence represents a polypeptide sequence of the invention.
                                          818
                                                                                                                                                                                                                                                                                                                                                                                          Human, breast cancer; T cell; tumour protein; antigen presenting cell;
immune response; CD4+; CD8+; cytostatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New polynucleotides, useful for treating and diagnosing cancer, particularly breast cancer by stimulating immune response in a patient and inhibiting the development of cancer.
NIEDALNOLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYBEF
                         NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jiang Y, Houghton RL, Mitcham JL, Wang T;
                                                                                                                                                                                                                                                                                                                                                 Human breast cancer associated polypeptide sequence #4
                                                                                 710
                                                                                 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNBPLTGNS
                                                                                                        819 LEMTRNGTQLQNFTLDRSSVLVDGYFPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 2; SEQ ID NO 206; 151pp; English
                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                           ADN40451 standard; protein; 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-NOV-1999; 99US-00451651.
22-FEB-2000; 2000US-00510662.
10-MAR-2000; 2000US-0052386.
07-APR-2000; 2000US-00545068.
15-MAY-2000; 2000US-00571025.
06-FEB-2001; 2001US-00778320.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-NOV-2003; 2003US-00714389
                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Day CH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2004-399689/37.
N-PSDB; ADN40450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CORI-) CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2004101899-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                        12-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dillon DC,
Mcneill PD;
                                      759
                                                                               674
                                                                                                                                                                                                                                                                  ADN40451;
                                                                                                                                                                                 RESULT 20
ADN40451
                                    셤
                                                                                                                                                                                                                         ઠ
                                                                               ò
```

Sequence 914 AA

```
133
                                                                                                                   338
                                                                                                                                                                                                                                                                                 458
                                                                                                                                                                                                                                                                                                                        373
                                                                                                                                                                                                                                                                                                                                                                                                     433
                                                                            193
                                                                                                                                                                                                                                                                                                                                                                                                                                          578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       638
                                                                                                                                                             253
                                                                                                                                                                                  339 INNILRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 398
                                                                                                                                                                                                                                          313
                                                                                                                                                                                                                                                                                                                                                              518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  434 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
74 SRKFNTTERVLØGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGBATGVDAICTHRPDPTGP
                                                                                                       279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                399 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKOSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          579 GVIQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFISSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     639 DKVTTLYKGSQLHDTPRFCLVTINLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                       219 SRKFNTTERVLÓGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGBATGVDAICTHRPDPTGP
                                                                              GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                           194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                          VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDRPPT
                                                                                                                                                                                                                                                                                                                        TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                           459 TPKPATTFLPPLSEATTAMGYHLKTLTLNPTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                     374 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                            519 PLFQXSSMGPFYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              494 DKVTTLYKGSQLHDTPRPCLVTNLTMDSVLVTVKALPSSNLDPSLVBQVFLDKTLNASPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    699 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 759 NIEDALNOLFRNSSIKSYFSDCOVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNBPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               819 LEMTRNGTOLONFTLDRSSVLVDGYFPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Search completed: March 20, 2006, 07:35:37
Job time : 277.726 secs
                                                                                                                                                                                                                                                                                                                        314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          674
                                                                              134
                                                                                                                                                                                                                                          254
                                                                                                             셤
                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
  ò
                                   8
                                                                              ò
                                                                                                                                                             ò
                                                                                                                                                                                                셤
                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

THIS PAGE BLANK (USPTO)

```
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
```

OM protein - protein search, using sw model

March 20, 2006, 07:28:38 ; Search time 140.158 Seconds (without alignments) 3765.293 Million cell updates/sec

Run on:

US-10-687-035-1 3945 1 AAQPARRARRIKLFTHRSSV.....QKLISEEDLNMHTGHHHHHH 748 Title: Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

2166443 segs, 705528306 residues Searched:

2166443 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 100 summaries

Database

UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

			•																													
	Description	Q96rk2 homo sapien	Q8wxi7 homo sapien	homod		mus n	_	Q7r3f3 giardia lam			Q94k06 arabidopsis		Q6b188 debaryomyce	Q54e23 dictyosteli	Q54e54 dictyosteli			_	Q4udd4 theileria a	œ	Q54v40 dictyosteli	Q8uz27 oat mosaic	Q4vwf3 tortoise he	Q54hy5 dictyosteli	Q5t0w9 homo sapien	Q81sn0 bacillus an	Q8eus5 mycoplasma	Q7gsal giardia lam		Q6fq05 candida gla		0755bв авћруа довв
SUMMARIES	a ID	Q96RK2 HUMAN	: Q8WXI7 HUMAN	O9H7S7_HUMAN	: Q6ZQW5_HUMAN	Q9D1H1_MOUSE	: 027557_METTH	Q7R3F3_GIALA	Q4MT18_BACCE	Q8JZM8_MOUSE	Q94K06_ARATH	YN96_YEAST	Q6BL88 DEBHA	Q54E23_DICDI	QS4ES4_DICDI	O54JR7_DICDI	O4J6T1_SULAC	Q81FJ0_BACCR	Q4UDD4_THEAN	Q86AL8_DICDI	Q54V40_DICDI	Q8UZ27_9POTY	Q4VWF3_9HERP	OS4HYS_DICDI					Q7U7M8_SYNPX			Q755B8_ASHGO
	ı DB		~	~	7	~	~		7	~		7		~	~	~	~	~		7		~				~	•		•	•	•	
	Query Match Length DB	669	22152	1148	867	258	1408	959	5010	3443	605	1117	1526	797	1230	1447	879	5017	1166	1364	882	2340	1056	1818	1011	5017	1084	5572	10791	1012	2121	2535
46	Query Match	92.9	92.5	92.3	39.6	18.7	3.7	3.6	3.6	3.5	3.4	3.4	3.4	3.4	33	3.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.2	3.5	3.2	3.2	3.2
	Score	3665	3649	3642	1562.5	736.5	144.5	143.5	141.5	138	136	135.5	134.5	132.5	131	131	128	128	127	127	126.5	126.5	126	126	125.5	125.5	125	125	125	124.5	124.5	124.5
	Result No.	1	8	٣	4	ស	9	7	60	0	10	11	12	13	14	15	16	17	18	19	50	21	22	23	24	25	56	27	28	29	30	31

ALIGNMENTS

						•							:									٠.		٠.														٠.		•						:								٠.
 Q63df3 bacillus ce										Q4uill theileria a	Oshfoo baciling th	Ospvio methanosarc	QSctk9 cryptospori	Q637g8 bacillus ce	USID94 PIABEOGIUM	P49790 homo sapien	Q9ytk3 ateline her	O9ppz5 ureaplasma	O74851 SCN1ZOSSCCN	Q66853 avian adeno	Q4uet5 theileria a	O89001 mus musculu	Q55617 dictyostell	Ogvei3 drosophila	Osegp2 homo sapten	Q6hkws bacillus th	Ocnis kluyveromyc	QBev69 mycopiasma	OSCÍG8 CIVATOBBOLI	Q9uli2 drosophila	Q54kw5 dictyosteli	Oseoge grosophila Osekeo mus musculu	Q54hl8 dictyosteli	Osamq6 candida alb	Q5a849 candida alb	OSCV09 cryptosport	Q9ukn0 homo sapien	099fj4 porcine tes	Q41980 qibberella	Q4j9k1 sulfolobus	070320 cavia porce	O6mzm7 homo sapien	Q68dp9 homo sapien	Q8vq99 staphylococ	Office mus musculu	OBcp76 staphylococ	Oshpa2 staphylococ	Q5kfx2 cryptococcu	xenopus bacillus	Q7qwg2 giardia lam	Q6cqt3 kluyveromyc	Q8dkg0 synechococc	homo sap	bacteroid
Q63DF3_BACCZ																																																						Q5LGX7
90																																																						
5017	1442	1837	2477	2520	1085	7447 7441	393	767	1206	1260	2520	1608	2319	2520	1277	1475	2471	5005	1131	936	1322	1377	1380	2833	3080	5017	651	1397	1447	1449	1836	631	846	1111	1225	11696	957	2206	738	196	1463	2193	2267	2283	2229	9439	10203	669	1807	999	704	729	1045	1136
3.5			•	•	•	•				•				•					•							•								-			-						-					'			٠.		-	Ξ.
124.5	124	123.5	123.5	123.5	123	123	122.5	122.5	122.5	122.5	122.5	122	122	122	121 5	121.5	121.5	121.5	121	120.5	120.5	120.5	120.5	120.5	120.5	120.5	120	120	120	120	120	119.5	119.5	119.5	119.5	119.5	119	119	118.5	118.5	118.5	118.5	118.5	118.5	118.5	118.5	118.5	118	118	117.5	117.5	117.5	117.5	117.5
3 2	. Q.	35	36	37	90 0	υ 4 ν C	41	42	43	4, 4 4, 1	. 4 . 6	47	48	9 0	, r	22	23	54	o o	57	28	29	09	62	63	64	65	9 6	9	69	2 :	72	73	74	75	7,0	78	6,0	818	85	83	8 2	98	87	20 G	0 6	91	8 6	y Q J 4	9.6	96	97	66	100

```
DATA COCCOS ON THE COCCOS ON T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                               셤
                                                                                                                                     ò
                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                  원
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6300 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 6359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6360 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 6419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6900 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 6659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               254 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74 SRKFNTTERVLØGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDFTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDILINE=21347965; PubMed=11369781; DOI=10.1074/jbc.M103554200; Yin B.W., Lloyd K.O.; White M.O.; Lloyd K.O.; "Molecular cloning of the cal25 ovarian cancer antigen. identification as a new mucin, mucin."; Biol. Chem. 276:27371-27375(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6420 INNLRYMADMGQPGSLKFNITDNVMQHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini, Hominidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 6995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  744958 MW; 80C797DBDBF33A2B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lloyd K.O., Yin B.W.T.;
Submitted (SEP-2003) to the EMBL/GenBank/DDBJ databases.
EMBL; AF7561486; AAK74120.3; -; mRNA.
HSSP, Q9D1H1; 11VZ.
                                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92.9%; Score 3665; DB 2;
99.9%; Pred. No. 2.7e-237;
iive 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6995 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMR; Q56RK2; 6803-6922.
Ensembl; ENSG0000181143; Homo sapient
InterPro; IPR000194; ATPase_a/bcentre.
InterPro; IPR000194; SEA.
InterPro; IPR019092; SEA.
SMART; SM00200; SEA; 10.
                                              PRT;
                                                                                                              Created)
                                                                                                          01-DEC-2001 (TrEMBLrel. 19,
01-MAR-2004 (TrEMBLrel. 26,
01-MAR-2004 (TrEMBLrel. 26,
                                    Q96rk2_HUMAN PRELIMINARY;
Q96rk2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                        Mucin 16 (Fragment).
Name=MUC16;
                                                                                                                                                                                                                                                                           Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 696; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                  SO DE REPRESENTATION DE LA PRESENTATION DE LA PRESE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
```

```
21516
                                                                                             6779
                                                                                                                                         133
5660 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 6719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYYNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                         NIEDAIMQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                 494 DKYTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                York L.;
"The CA 125 gene: an extracellular superstructure dominated by repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE.
MEDLINE=21646939; PubMed=11786729; DOI=10.1159/000050638;
O'Brien T.J., Beard J.B., Underwood L.J., Dennis R.A., Santin A.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 92.5%; Score 3649; DB 2; Length 22152; Best Local Similarity 99.7%; Pred. No. 1.9e-235; Matches 695; Conservative 0; Mismatches 2; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00200; SEÅ; 23.
PROSITE; PS00152; ATPAGE ALPHA_BETA; UNKNOWN_1.
PROSITE; PS50045; SEÅ; 11.
SEQUENCE 22152 AA; 2352668 MW; B3E7BDF19997A440 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O'Brien T.J., Underwood L.J., Beard J.B;;
Submitted (OCT-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AF414442; AAL651312; -; mRNA.
EMSEMDI; AF416442; AAL651312; -; mRNA.
EMSEMDI; ENSG0000181143; Homo sapiens.
HGNC; HGNC:15582; MUCI6.
InterPro; IPR000194; ATPase_a/bcentre.
InterPro; IPR000082; SEA.
                                                                                                                                                                                                                                                                                                                                                                                  6936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-2004 (TrEMBLrel. 25, Last sequence update) Ovarian cancer related tumor marker CA125.
                                                                                                                                                                                                                                                                                                                                      710
                                                                                                                                                                                                                                                                                                                                                                    6900 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                         LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR 2002 (TrEMBLrel. 20, Created)
01-MAR-2003 (TrEMBLrel. 23, Last seq
01-MAR-2004 (TrEMBLrel. 26, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequences.";
Tumour Biol. 22:348-366(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QBWXI7_HUMAN PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF01390; SEA; 51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21457
                                                                                                                                                                                                                                              614
                                                                                                                                                                                                                                                                                                                                         674
```

```
14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                134 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               614
                                                                                                                                                                                                                                                       CDNAB. ";
       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                    21696
                                                                                                                                                                                                                                                                                                                                                     21816
                                                                                                                                                                                                                                                                                                                                                                                                                                 21936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22056
                                                                                                                                                                                                                                                                                                         433
                                                                                                                                                                                                                                                                                                                                                                                                         493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ota T., Suzuki Y., Mishikawa T., Otatki T., Sugiyama T., Irie R., Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H., Sekine M., Obayashi M., Nishikawa T., Shibahara T., Tanaka T., Ishii S., Yamanoto J.-I., Saito K., Kawai Y., Isono Y., Nakamura Y., Yamanoto J.-I., Saito K., Kawai Y., Isono Y., Nakamura Y., Nagateuma M., Sudahari K., Murakami K., Yasuda T., Iwayanagi T., Wagateuma M., Shiratori A., Sudo H., Hosoiri T., Kaku Y., Kodaira H., Kondo H., Sugawara M., Takhashi M., Kanda K., Yokoi T., Furuya T., Kikkawa B., Omura Y., Abe K., Kamihara K., Katsuta N., Sato K., Tanikawa M., Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K., Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K., Ishida S., Omo Y., Takiguchi S., Watanabe S., Yosida M., Hotuta T., Kusano J., Kanehori K., Takahashi-Fujii A., Hara H., Tanase T.-O., Momura Y., Matsunawa H., Satoh M., Takani S., Takeuchi K., Arita M., Imose N., Musashino K., Yuuki H., Oshima A., Sasaki N., Aotsuka S., Komila M., Satoh M., Takami S., Terashima Y., Suzuki O., Nakagawa S., Senoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H., Alishigaki H., Watanabe T., Sugiyama A., Takemoto M., Kawakami B., Yamazaki M., Watanabe T., Kumagai A., Itakura S., Fukuzumi Y.,
                                                                                                                                                                                                                                                                                                                                   PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9H757 HUMAN PRELIMINARY; PRT; 1148 AA.
Q9H757,
Q9H757,
Q0H757;
Q1-MAR-2001 (TrEMBLrel. 16, Created)
Q1-MAR-2003 (TrEMBLrel. 23, Last sequence update)
Q1-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Hypothetical protein FLJ14303.
Hypothetical protein FLJ14303.
Hymon sapiens (Human)
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Fuarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                    21637 VDLLCTYLQPLSGPGLPIKQVFHBLSQQTHGITRLGPYSLDKDSLYLNGYNBPGLDBPPT
                                                                                                                                                                                                                             TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WIGSTYQLVDIHVTEMESSVYQPISSSSTQHFYINFIINIPYSQDKAQPGTINYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                 INNLEYWADMGQPGSLKFNITDNVWKHLLSPLFORSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTBGYLQHLLR
                                                                                                   VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                    PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                    GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LRMIRNGTQLQNFTLDRSSVLVDGYSPNRNBPLIGNS 22093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LEMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=14702039; DOI=10.1038/ng1285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IISSUE=Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                    374
                                                                                                                                                                                                                                                                                                                                                                                                       434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             614
     194
                                                                                                   254
                                                                                                                                                                                                      314
                                                                                                                                                                                                                                                  21697
                                                                                                                                                                                                                                                                                                                                                  21757
                                                                                                                                                                                                                                                                                                                                                                                                                                                      21817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HUMAN
                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THE STATE OF THE S
                                    셤
                                                                                                   8 6
                                                                                                                                                                                 કે
                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

```
253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        393 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENWWPG 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 933 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYPNFTITNLPYSQDKAQPGTTNYQRNKK 992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73
                       Ono T., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y., Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S., Okitani R., Kawakami T., Noguchi S., Itoh T., Shigeta K., Senba T., Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Saaaki M., Togashi T., Oyama M., Hata H., Watanabe M., Komatsu T., Mizuno T., Satoh T., Shirai Y., Takahashi Y., Nakagawa K., Okumura K., Nagase T., Nomura N., Kikuchi H., Masuho Y., Yamashita R., Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.; Complete sequencing and characterization of 21,243 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   453 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGSRLTLLRPBKDGEATGVDAICTHRPDFTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          573 INNLRYMADMGQPGSLKENITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  813 GVIQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 873 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PTHRSSVSTTSTPGTPTVYLGASKTPASI FGPSAASHLLI LFTLNFT I TNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                513 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VDLLCTYLQPLSGPGLP1KQVFHELSQQTHG1TRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               633 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGLDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVTQLGFYVLDRDSLPINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
Fujiwara T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW; 3861B0D5EFDF8ABC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 3642; DB 2;
Pred. No. 6.4e-237;
0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fujimori Y., Komiyama M., Tashiro H.,
                                                                                                                                                                                                                                                                                                                                           -; mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000082; SEA.
Pfam; PF01390; SEA; 7.
PROSITE; PS50024; SEA; 3.
SEQUENCE 1148 AA; 127957
                                                                                                                                                                                                                                                                                                           Nat. Genet. 36:40-45(2004).
EMBL; AK024365; BAB14899.1;
HSSP; Q9D1H1; 11VZ.
SMR; Q9H7S7; 956-1075.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 92.3
Best Local Similarity 99.6
Matches 694; Conservative
```

us-10-687-035-1.rup

```
NUCLECTIDE SEQUENCE.

STRAIN=C57BL/6J; TISSUE=Whole body;

MEDLINE=210BS660; PubMed=11217851; DOI=10.1038/35055500;

REMAIN-C57BL/6J; TISSUE=Whole body;

Rawai J., Shinagawa A., Shibata K., Yoshino M., Itch M., Ishii Y.,

Arakawa T., Hara A., Fukunishi Y., Komo H., Adachi J., Fukuda S.,

Arakawa T., Rawa M., Nishi X., Kiyosawa H., Kondo S., Yamanaka I.,

Alzawa K., Izawa M., Nishi X., Kiyosawa H., Kondo S., Yamanaka I.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Relischmann W., Gaasterland T., Gissi C., King B., Kochhua H.,

Ruell P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Rochin P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.P.,

Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

Gustinoich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

Iyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,

Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

Whymshaw-Borits A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Norabhiav-Borits A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                     546 -KTLNASFHWLGS-TYQLVDIHVTEMESSVYQPTSSS---STQHFYLNFTITNLPYSQDK 600
                                                                                                                                                                    LSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADM 758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=C57BL/6J; IISSUE=Whole body;
The FANTOM Consortium,
the RIKEN Genome Exploration Research Group Phase I & II Team;
the RIKEN Genome Exploration Research Group Phase I will Team;
analysis of the mouse transcriptome based on functional annotation of
60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Mus musculus 19-day embryo whole body cDNA, RIKBN full-length enriched
11brary, clone:1110008114 product:hypothetical SEA domain containing
protein, full insert sequence.
                                               492 IQDKVTTLYKGSQLHDTFRFCLVTNL--TMDSVLVTVKALFSSNLDPSLV----EQVFLD
                                                                                                                                                                                                                               601 AQPGTTNYQRNKRNIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNF-SP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Butheria, Buarchontoglires, Glires; Rodentia, Sclurognathi;
Muroidea, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE.
STRAIN=C57BL/6J; TISSUE-Whole body;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                   LSGPGLPIKQVFHBLSQQTHGITRLGPYSLDKDSLYLNGHHTLQRQSTT 867
                                                                                                                                                                                                                                                                                                                                         660 LA-RRVDRVAIYEEFLRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLT 707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9DIHI_MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEOUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name=1110008114Rik;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Muroidea; Muridae
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hayashizaki Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              [2]
NUCLEOTIDE
                                                                                                                                                                                  669
                                                                                                                                                                                                                                                                                                                                                                                                 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                  셤
                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                 유
                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LGARYTGCRVIALRSVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGP 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GSRKFNTTERVLOGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTG 132
                                                                                                                                                                                                                                                                                                                                                                                                                     Suzuki O., Sasaki N., Aotsuka S., Shoji T., Ichihara T., Shiohata N.,
Buzuki O., Sasaki N., Aotsuka S., Nomura R., Yoshikawa Y.,
Matsumura Y., Moriya S., Chiba E., Momiyama H., Onogawa S.,
Raeriyama S., Satoh N., Matsunawa H., Takahashi E., Kataoka R.,
Kuga N., Kuroda A., Satoh I., Kamata K., Takami S., Terashima Y.,
Matanabe M., Sugiyama T., Irie R., Otsuki T., Sato H., Wakamatsu A.,
Ishii S., Yamamoto J., Isono Y., Rawai-Hio Y., Saito K., Nishikawa T.,
Kimura K., Yamashita H., Matsuo K., Nakamura Y., Sekine M.,
Kikuchi H., Kanda K., Wagatsuma M., Murakawa K., Kanehori K.,
A rakahashi-Fujii A., Oshima A., Sugiyama A., Kawakami B., Suzuki Y.,
Sugano S., Nagahari K., Masuho Y., Nagai K., Isogai T.,
Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ||:||:||:||:||TITNLRYEENMOHPGSRKFNTTERVLOGLLRSLFKSTSVGPLYSGCRLTLLRPEKDGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPGSRKFNTTERV
                                                                                                                                                                                     Hypothetical protein FLJ46845.
Homo sapiens (Human).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----GVVSEEP----FTLNFTINNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YSLDKDSLYLNGYNEPGPDEPPTTPKPAT-----TFLPPLSE-ATTAMGYHLKTLTLNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |:||||:|||:||
YTLDRDSLYVNGFTQ--RSSVPTTSIPGTPTVDLGTSGTPVSKPGPSAASPLVLFTLNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISNLOYSPDM-GKGSATFNSTEGVLQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GVDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----SIRGE----YQINFHIVNWNL-SNPDPTSSEYITLLRD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFT1TNLRYEENM-WP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTST------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   39.6%; Score 1562.5; DB 2; Length 867; llarity 46.3%; Pred. No. 1.4e-96; Conservative 102; Mismatches 234; Indels 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   867 AA; 96200 MW; C7B3033258839622 CRC64;
                                                                                                                                Last sequence update)
Last annotation update)
                                                     867 AA
                                                     PRT;
                                                                                                          Created)
                                                                                                    05-JUL-2004 (TrEMBLrel. 27, 05-JUL-2004 (TrEMBLrel. 27, 05-JUL-2004 (TrEMBLrel. 27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000082; SEA.
Pfam; PF01390; SEA; 4.
PROSITE; PS50024; SEA; 2.
                                                  QGZQWS HUMAN PRELIMINARY;
QGZQWS;
                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 356; Conserv
                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Uterus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
RESULT A

OG ZOWS I

O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

à

Š

à

ò

```
344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
DDT READ BY RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SDCQVLAFRSVSNNNNHTGVDSLCNFSPLARRVDRVAIYEEFLRMTHNGTQLLNFTLDRK 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
A Arakawa T., Bono H., Carninci P., Fukunia S., Fukunishi Y., Furuno M.,
Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,
A Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
A Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
Muramatsu M., Hayashizaki Y.,
Muramatsu M., Hayashizaki Y.,
E. Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
EMBL, AKO03577; BAB22869.1; -; mRNA.
                                                                     MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.,
"Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---PISSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKRNIEDALNQLFRNSSIKSYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 AEIPTTSSSSQHFNLNFTITNLPYSQDIAQPSTTKYQQTKRSIENALNQLFRNSSIKSYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SDCOVSTFRSVP-NRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQNFTLDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                517 LIMDSVLVIVKALFSSNLDPSLVEQVPLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQ-
                                                                                                                                                                                                                                                                               MEDLINE-C57BL/6J; TISSUE=Whole body;
MEDLINE-C57BL/6J; TISSUE=Whole body;
MEDLINE-C57BL/6J; TISSUE=Whole body;
MEDLINE-C57BL/6J; TISSUE-Whole 1076861; DOI=10.1101/gr.152600;
MEDLINE-C57BL/6J; PubMed=11076861; DOI=10.1101/gr.152600;
MEDLINE-C57BL/6J; Nishi K., Aizawa K., Sanainci P., Sanainci P., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Sumi N., Ishii Y., Mareumoto H., Sakaguchi S., Ikegami T., Kaahiwagi K., Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Yoneda Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
**RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2; Length 258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Score 736.5; DB 2; Length
; Pred. No. 1.5e-41;
23; Mismatches 25; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B64D9B63394D84E7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ensembl; ENSMUSGO000032134; Mus musculus.
MGI; MGI:1920982; 1110008114Rik.
InterPro; IPR000082; SEA.
                                                 STRAIN=C57BL/6J; TISSUE=Whole body;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=C57BL/6J; TISSUE=Whole body;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypothetical protein.
SEQUENCE 258 AA; 29426 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SVFVDGYSQNRDDDVMKNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 73.4%
Matches 146; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF01390; SEA;
                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

1408 AA.

PRT;

OZ7557 METTH PRELIMINARY; 027557;

RESULT 6 027557 ME ID 0275 AC 0275

```
816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115 GEATGVDAICTHRPDPTGPGLDREQLYLEL-SQLTHSITELGPYTLDRDSLYVNGFTHRS 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ::|:| :: :: |: | | : | | : | | : | | : | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26 PGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETRV------ 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58 NPTIINLRYBENMWPGSRKFNTT---ERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKD 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ----NNLRYMADMGQ 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    576 E-PLKVAVTADLVAYGDLPDSYTAEL---YIDGVLLDSRAVTVAASSRTTVSFNRTLAAG 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     632 LYBITINDLEPELVYVMEGEKFYIEN--FTLTPQSGAAPLTVTVSAMITNIDSNPRSYTA 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     746 İLSINYIVSPVEGKSPLINVIVIALIV--------RINGDLAG 777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  866 LVIGFTARLMVDGVVVQENIV---SLSPGETREIAMGTLLIPGNHTVGINEFSKIVRVLR 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YRLRINSGIDVIIRVLEPDPIITGF------NVIPVTGPAPL--SVRASLNVINPHD 865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              255 --DLLCTYLQP----LSGPGLPIKQVFHELSQQTHG------ITRL--GPYSLDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISNLQYSPDMGKGSATFNSTEGVLQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DSLYING-----YNEPGPDEPPTTPKPATTFLPPLSEATTAMGYH----LKTLT-LNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      404 VDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLSIRGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        778 -DFAVTLYLDDVA------WETRTVS------VPGKSSVLVS--FKKBLAFPGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YQINFHI---VNWNLSNPDPTSSEYITLIRDIQDKVTTLYKGSQLHDTFRFCL-VTN---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dubois J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith D.R., Doucette-Stamm L.A., Deloughery C., Lee H.-M., Dubois J Aldredge T., Bashirzadeh R., Blakely D., Cook R., Gilbert K., Harrison D., Hoang L., Keagle P., Lumm W., Pothier B., Qiu D., Spadafora R., Vicare R., Wang Y., Wierzbowski J., Gibson R., Jiwani N., Caruso A., Bush D., Safer H., Patwell D., Prabhakar S., McDougall S., Shimer G., Goyal A., Pietroveski S., Church G.M., Daniels C.J., Mao J.-I. Rice P., Noelling J., Reeve J.N.; "Complete genome sequence of Methanobacterium thermoautotrophicum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1408;
                                                                                                                                                                                                                                                                Methanobacterium thermoautotrophicum.
Archaea; Buryarchaeota; Methanobacteria; Methanobacteriales;
Methanobacteriaceae; Methanothermobacter.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----LIMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFHWLG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           444 NFTVT------PDACKKNLTGLSDGFLTRFTPFIISNISVTPL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1408 AA; 152736 MW; 294EC7742ABB29F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      deltaH: functional analysis and comparative genomics.";
3.7%; Score 144.5; DB 2;
20.1%; Pred. No. 1.9;
tive 99; Mismatches 258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            J. Bacteriol. 179:7135-7155(1997). -
EMBL; AE000911; AAB85988.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174 SVPTTSTGVVSEEPFTLNFTI------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=Delta H;
MEDLINE=98037514; PubMed=9371463;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR010620; SBBP.
Pfam; PF06739; SBBP; 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 20.18
Matches 157; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR; H69068; H69068.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                              WCBI_TaxID=187420;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Complete proteome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

401

```
Control of the sequence should be sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |::|||::|
3760 SSAMYQYVSIPTAPPVNRSATSNIVTTSLQNANIISIKQADVTFVSIGQNITYTNTLQNI 3819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | : | : | : | : | : | : | SIPAGTTFVPDSVTINGVLQPDTNPENGISIGTIPSNSSKTILFQVQTNNPPTETBIVNQ 3759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MWPGSRKFNTTERVLQGLLRP---LFKNTSVGPLYSGCRLTLL-----RPEKDGEATG- 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GPYTLD-------RDSLYVNGFTHRSSVP---TTSTGVVSEEPFTLNFTINN 196
                                                                                                                                                                                                               - TEYITGONADLNNMLIEV-YGTDKEQ------DPSLSTAGISBEFNEÄ 446
                                                                                                                                                                                                                                                                                   -DRVAIYEEFL 674
                                                                                                                                                                                                                                                                                                                                       447 MNATY---PDSHAARHDTLNKDGIIQYQTIVFTNFKSEADRIFRYFDDMRYRVAVIHGDM 503
----IEROTLLFSATFPKE-----IKNLAMEF 363
                                                       ----SVIVIVKALFSSNLDPSLVEQVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQ 575
                                                                                                                                                                                                                                                                                                                                                                                                  675 RMTRNGTQLQNFTLDRSSVLVDGYSPNR------NEPLTGNSADIQHSGGRSSLE 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                    504 TOKERENNIKYFKAGRINILIGIDVAQRGLDIPNVRLVLNYDLPGNVDDYTHRIGRIGRA 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10 RIKLFIHRSSVSTISTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --EQLYLELSQ---LTHSITEL
                                                                                                                                                                      576 PTSSSSTQHFYLNFTITNLPYSQDXAQPGTTNYQRNKRNIEDALNQLFRNSSIKSYFSDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 5010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3658 QAQLTITKTSNPTTVDIGGTILYISEVKNIGNV-----DAINIIFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus;
                                                                                                                                                                                                                                                                                      ------CNFSPLARRV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                       | : | | : | | : | | : | | 364 LRQDRLVSITVGQIGSSN--PNLAQRVVLVERSNDKLRLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 18.5%; Pred. No. 21;
Matches 153; Conservative 123; Mismatches 328;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.6%; Score 141.5;
18.5%; Pred. No. 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
  320 HELPPIHHSVQ-DPSNPDITHQ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120 VDAICTHRPDPTGPGLDR-----
                                                                                                                                                                                                                                                                                         636 QVSTFRSVPNRHHTGVDSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-SEP-2005 (TrEMBLrel. 31, 13-SEP-2005 (TrEMBLrel. 31, 13-SEP-2005 (TrEMBLrel. 31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q4MT18_BACCE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cell surface protein.
ORFNames=BCE G9241 1620;
Bacillus cereus G9241.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bacillus cereus group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=269801;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    724 G 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         564 Ġ 564
                                                             521
                                                                                                                                                                                                                                 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                    ઠે
                                                                                                            셤
                                                                                                                                                                      8
                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                       원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                              -----GRSVQVAFNHTIENAGIYLAGIGSLTPLDVRVLSEPAISNLSATPLTGVSPHRI 1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---- 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     260 SGPQRDALQMGCDILVATPGRLLDFIKQGVVETTYVRFVVFDECDRMLDMGFEPQIRDIL 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GEYOINFHIVNWNLSNPDPISSEYITLLRDIQDKVITLYKGSQLHDTFRFCLVTNLTMD- 520
                                                                      697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IKQV-----FHELSQQTHGITRLGPYSLDKDSLYLN----GYNEPGPDEPPTTPKPATTF 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----TGMVGYDLLACSQTGSGKTCAFIIPILHRIATEKLKLYTMSPGHHEDRDFRFN 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -KGSATFNSTEGVLQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDP 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ------VTQLGFYVLDR-DSLFINGYAPQNLSIR 461
                                   -STYQLVDIHVTEMESSVYQP----TSSSSTQHFYLNFT----ITNLPYSQDKAQPGT
                                                                                                                                                                                                                                                           GVDSLCNFS-----PLARRVDRVAIYEEFLRMTRNGTQLQNFTLDRS-----SVLVDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.6%; Score 143.5; DB 2; Length 656;
21.1%; Pred. No. 0.7;
ive 63; Mismatches 185; Indels 179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=WB C6;
Morrison H.G., McArthur A.G., Adam R.D., Aley S.B., Gillin F.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     322 LPPLSEATTAMGYHLKTL-----TLNFTISNLQ-----YSPDMG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QTR3F3 GIALA PRELIMINARY; PRT; 656 AA.
QTR3F3;
01-MAR-2004 (TrEMBLrel. 26, Created)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Giardia lambla ATCC 50803.
Eukaryota; Diplomonadida; Hexamitidae; Giardia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Olsen G.J., Sogin M.L.;
"Draft sequence of the Giardia lamblia genome.";
Submitted (MAR-2003) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP; P10081; 1FUK.
GO; GO:0005524; F:ATP binding; IEA.
GO; GO:0008026; F:ATP-dependent helicase activity; IEA.
GO; GO:0003676; F:nucleic acid binding; IEA.
InterPro; IPR001410; DESD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Helicase C; 1.
AA; 73379 MW; EFF73D219C01978B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  preliminary data.
EMBL; AACB01000015; EAA41889.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPR011545; DEAD/DEAH N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR001650; Helicase_C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 415 VGPGLDIQQLYWELSQLTHG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 21.1 hes 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00270; DEAD; 1
Dfam: PF00271: Helicas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=184922;
                                                                                                                                                                                                                                                                                                                                                                                                                               LSP 1097
                                                                                                                                                                                                                                                                                                                                                                             698 YSP 700
                                                                                                                                                                                                                                                                                                                                                                                                                                  1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                         981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                임
                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOR SERVICE CONTRACTOR SERVICE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                               셤
                                                                                                                                            ઠે
                                                                                                                                                                                           8
                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                               용
```

Gapa

40;

us-10-687-035-1.rup

```
PROSITE; PS50856; AMOP; 1.
PROSITE; PS00022; EGF 1; UNKNOWN_1.
PROSITE; PS50026; EGF 3; 2.
PROSITE; AA3 AA, 365165 NW; 88
InterPro; IPR003886; NIDO.
                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 20.8
Matches 182; Conservative
                 InterPro; IPR001846; VWF
Pfam; PF03782; AMOP; 1.
Pfam; PF00109; BGF; 1.
Pfam; PF06119; NIDO; 1.
Pfam; PF00094; VWD; 1.
SMART; SM00723; AMOP; 1.
SMART; SM00181; EGF; 1.
SMART; SM00210; VWD; 1.
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                             TSI-----PPGNTVINISDTSYEYQIEPSSPIIQRRSLSNAVTTEVRTANVSALKSA-NR 3933
                                                                                                                                                TISSNITINIQPIDAILIAIKSANTILANIDETIEYTVII----QNNGSTI---TNSIFFT 4094
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DTIEDGA------VPIPGSVIVNNTVLPEADPNIGFSIPNIASS 4132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ------GEEQISTSNITFTEVITATIVATKTTPI-QYADLQTIIPYTISI 4338
                                                                                                                                                                                                                                                                                                                                                                                                            DPVGPGLDIQQLYWELSQLTHGVTQLGFYVLDRDSLFIN-------GYAPQNLSIR 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       617 DALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRM 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AETRVDLLCTYLQPLSGPG-LPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGP
                                                                                                                                                                                                            DEPPTTPKPATTFLPPLSEATTAMGYHLKTLTL-----NPTISNLQYSPD--MGKGSA
                                                                                                                                                                                                                                                                                                            TENSTEGVLQHLLRPLFQKSSMGPFYLGCQ-----LISLRPEKDGAATGVDTTCTYHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          462 GEYQINFHIVNWNLS--NPDPTSSEYI-----TLLRDIQDKVTTLYKGSQLHD----TF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       510 RPCLVTNLTMDSVLVTVKALPSS-NLDPSLVEQVPLDKTLNASFHWLGSTYQLVDIHVTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MESSVYQPTSSSSTQHFY-----LUPTITNLPYSQDKAQPGTTNYQRNKRNIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1241 LVNNIPQLNANPSTGILVGTIAPNISIPVTFSVTVIALPASGHVQNOSTSRYTIN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=129/SvJ;
MEDLINE-22079426; PubMed=12084055;
Desseyn J.-L., Clavereau I., Laine A.;
"Cloning, chromosomal localization and characterization of the murine mucin gene orthologous to human MUC4.";
Bur. J. Biochem. 269:3150-3159(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
Bukaryota, Wetazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Buarchontoglires, Glires, Rodentia, Sciurognathi,
Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              THNGNIQVENIIVTDIIPANTSPIENSVIVNGNAHPNDNPLSGIQID 4385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRNGT-QLQNFTLD------RSSVLVDGYSPNRNEPLTGNSAD 712
                    LRYMADMGQPGSLKFNITDNVMKHLL---SPLFQRSSLGARYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AF441786; AAM66254.1; -; mRNA.
EMBL; AF520422; AAM66746.1; -; Genomic_DNA.
EMBL; AF520421; AAM66746.1; JOINED; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGI; MGI:2153525; Muc4.
GO; GO:0007160; P:cell-matrix adhesion; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR005533; AMOP.
InterPro; IPR000742; EGF 2.
InterPro; IPR006209; EGF 1ke.
InterPro; IPR006210; IEGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-2002 (TrEMBLrel. 22, 01-OCT-2002 (TrEMBLrel. 22, 01-PEB-2005 (TrEMBLrel. 29,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QBJZM8 MOUSE PRELIMINARY;
Q8JZM8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=Muc4;
                                                                                                                                                                                                            309
                                                                                                                                                                                                                                                            3985
                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                            4042
                                                                                                                                                                                                                                                                                                                                                                                                            413
                                                                                                                                                                                                                                                                                                                                                                                                                                                            4095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
08452M8 MO
10 08452M8 MO
10 01-0
DT 01-1
DT 0
                                                                                                                                             g
                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                    ઠે
                                                       셤
                                                                                                            δ
                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
```

```
131 GSTPATTQVSPSSKUMSTVSTPITST-HKLSTLPQSQHTGSKGTSSNPQTTTTPEVTTST 1789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .671 HDLIKTKTSSORTISPGETTTSYAPIMSSSAPSTTHMLSTTSSTRSTSVDTRHTTTLMTQ 1730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1839 QSTSGDTGHTTAVRTQGSTPATTQVSLSSQNISTVSTPMTSTHKLSTLPQSQHTGSM--- 1895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1790 PSATTRDQIQTESSSQRTISPGETTTSHAPSMSSLAP---STTHM-----LSTTSSS 1838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 290 PYSLDKDSLYLNGYNEP--GPDEPPTTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISN 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---ALNQLFRNSSIKSYFSDCQVST----FRSVPNRHHTGVDSLCNFS 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                      148 -THSITELGPYTLDRDSLYVNGPTHRSSVPTTS-----TGVVSE--EPFTLNFTIN-NL 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    561 LVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKRNIED--- 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSQLHDTFRFCLVTNLTMDSV-LVTVKALFSSNLDPSLVEQVFLDKTLNASFHWLGSTYQ 560
                                                                                                                                                         23
                                                                                                                                                                                                                                                         60 TITNL--RYBENMMPGSRKFNTTERVLOG-----LLRPLFKNTSV--GPLYSGCRLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---GITRLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               348 LOYSPDMGKGSA--TFNSTEGVLQ-------HLLRPLFQKSSMGPFYLG
                                                                                                                                                      16 HRSSVSTTSTPGTPTV----YLGAS-----KTPASIP-----GPSAASHLLILFTLNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            239 -----RVIA-----RVIA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               388 CQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQLGFYVLDRDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    448 LFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPT-----SŞEYITLIRDIQDKVTTLYK
                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                         108 LLRPEK-----DGEATGVDAICTHRPDPTGPGLDREQLYLELSQL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198 RYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGC-------
                                                                                                     Indels 276;
                                                      DB 2; Length 3443;
3443 AA; 365165 MW; 88CC32D3226F632B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            257 ----LCTYLQP----LSGPGLPIKQVFHELS---QQTH----
                                                 3.5%; Score 138; DB 2; L 20.8%; Pred. No. 20; tive 92; Mismatches 324;
```

```
369 GKFSGEQRRLALYAAMFLPFRKTVYKDTKGKSIPVVNHIFKFSMKRKTSDAETVMNIHQT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; Z71682; CAA96349.1; -; Genomic_DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              its evolutionary implications.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OrderedLocusNames=YNR067C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; S63399; S63399.
GermOnline; 143412; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nature 387:93-98(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI TaxID=4932;
                                                                                                                                                                                                                                                                                                                                                                                                           K 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600 K 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YEAST
                                                              338
                                                                                                                         429
                                                                                                                                                                                                                                                                                                                                                                                                           495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NY96 YEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36NX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                     8
                                                                                                                   셤
                                                                                                                                                                            8
                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20;
        2094 DTGHSTVITTHGSTLATTQVSLTPSSQNMSTVSMPSTSSQELTSLPQRQHTG--SMETSS 2151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nguyen M., Karlin-Neumann G., Southwick A., Tripp M., Miranda M.,
A Nguyen M., Karlin-Neumann G., Southwick A., Tripp M., Miranda M.,
A Palm C.J., Bowser L., Jones T., Banh J., Carninci P., Chen H.,
A Cheuk R., Chung M.K., Haysshizaki Y., Ishida J., Kamiya A., Kawai J.,
Kim C., Lin J., Liu S.X., Narusaka M., Pham P.K., Sakano H.,
Sakurai T., Satou M., Seki M., Shinn P., Yamada K., Shinozaki K.,
B Ecker J., Theologis A., Davis R.W.,
Ewbl. AR370489; AAK43866.1; -, mRNA.
EWBL, AR370489; AAK43866.1; -, mRNA.
EWBL, BTO00361; AAN15680.1; -, mRNA.
R DOG GO.0005739; C:mitochondrion; IDA.
R InterPro; IPR012222; PAP CCA.
R InterPro; IPR012222; PAP CCA.
R InterPro; IPR012277; Polly A. Dol. Teg.
R InterPro; PTRN1374; Polly A. Dol. Teg.
R PANTHER; PTRN1374; Polly A. Dol. 1.
R PRSF; PIRSF000814; Polly A. Dol. 1.
R PROFESSE REAL PROFESSE REA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 113 KDGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHR 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSL-KFNITDNVMKHLLSPLFQRSS- 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ------LGARYTGCRVIALRSVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHEL 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    279 SQQTHG-----ITRLGPYSLDKDSLYLNGYNEPGPDEP------PTTPKP 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    309 DLMISGNGPVSAVTYLSDLKLFSVVFALPSSAEPSPENCGSLSQSYLEAMWSLLKTPRP 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SRIPTMKFGTAKDDAFRRDLTINSLFYNINSGAVEDLTERGIDDLKSGKIVTPLPAKATF 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----PLSEATTAMGYHLK 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lam B., Southwick A., Karlin-Neumann G., Nguyen M., Miranda M., Palm C.J., Bowser L., Jones T., Banh J., Carninci P., Chen H., Cheuk R., Chung M.K., Hayashizaki Y., Ishida J., Kamiya A., Kawai J., Kim C., Lin J., Liu S.X., Narusaka M., Pham P.K., Sakano H., Sakurai T., Satou M., Seki M., Shinn P., Yamada K., Shinozaki K., Ecker J., Theologis A., Davis R.W.; Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                   Name=r223/16.17; Synonyme=At1g22660;
Arabidopsis thaliana (Mouse-ear cress).
Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67; Mismatches 185; Indels 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 605;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          605 AA; 68953 MW; 2DB2778E49368A18 CRC64;
                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                      2152 OPONITPTVVTTSTLLSFSRGSTELÖTMSWGTSS 2185
                                                                 PLARRVDRVAIYEEFLRMTRNGTQLQNFTLDRSS 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                     605 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.4%; Score 136;
                                                                                                                                                                                                                                                                                                                                                                                                              TRNA adenylyltransferase-like protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.
                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                              Created)
                                                                                                                                                                                                                                                                                                                     (TrEMBLrel. 19, C
(TrEMBLrel. 19, I
(TrEMBLrel. 29, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20.6%;
                                                                                                                                                                                                                                                                  Q94K06_ARATH PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=3702,
                                                                                                                                                                                                                                                                                                                        01-DEC-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                01-FEB-2005
                                                                 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                094K06
                                                                                                                                                                                                             RESULT 10
094K06 ARA
1D 01-DE
DT 01-PE

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                   용
                                                              8
```

This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its 446 542 KIWDAKPLVNGREIMQIAELKGGSRLIREWQQK--LLTWQLAYPNGTAEBCKEWMRDIKA 599 483 MEDLINES 97313263. Pubmed 9169873,

MEDLINES 97313263. Pubmed 9169873,

A Hippsen P. Kleine K., Poehlmann R., Duesterhoeft A., Hamberg K.,

A Altmann R., Andre B., Urrestarazu L.A. Aert R., Albermann K.,

A Altmann R., Andre B., Urrestarazu L.A. Aert R., Albermann K.,

A Altmann R., Boskovic J., Buitrago M.J., Bussereau F., Coster F.,

Beinhauer J.D., Boskovic J., Buitrago M.J., Bussereau F., Coster F.,

Doignon F., Dondey H., Dubois E., Fiedler T.A., Fleig U., Floeth M.,

Fritz C., Gaillardin C., Garcia-Cantalejo J.M., Glansdorff N.,

A Goffeau A., Gueldener U., Herbert C.J., Heumann K., Heuss-Neitzel D.,

A Hibbert H., Hinni K., Iraqui Houssaini I., Jacquet M., Jimenez A.,

Jonniaux J.-L., Karpfinger-Hartl L., Lanfranchi G., Lepingle A.,

Levesque H., Lyck R., Maftahi M., Mallet L., Maurer C.T.C.,

Messenguy F., Mewes H.-W., Mosell D., Nasr F., Nicaud J.-M.,

Niedenthal R.K., Pandolfo D., Pierard A., Piravandi B., Planta J.L.,

Pohl T.M., Purnelle B., Rebischung C., Remacha M.A., Revuelta J.L.,

Rinke M., Saiz J.B., Sartorello F., Scherens B., Sen-Gupta M.,

Soler-Mira A., Urbanus J.H.M., Valle G., Van Dyck L., Verhasselt P.,

Wambutt R., Wedler H., Zollner A., Hani J.,

"The nucleotide sequence of Saccharomyces cerevisiae chromosome XIV TLTLNFTISNLQYSPDMGKGSATFNSTEGVLQH-----LLRPLFQKSSMGPFYLGCQLIS 392 447 SLF----INGYAPQNLS-IRG-----EYQINFHIVNWNLSNPDPTSSEYITLLRDIQD 494 European Bioinformatics Institute. There are no restrictions on as long as its content is in no way modified and this statement is 393 LRPEKD----CAATGVDTTCTYHPDPVGPGLDIQQLYWELSQL--THGVTQLGFYVLDRD Saccharomyces cerevisiae (Baker's yeast). Eukaryota, Fungi, Ascomycota, Saccharomycetes; 01-0cT-1996 (Rel. 34, Created)
01-0cT-1996 (Rel. 34, Last sequence update)
10-MAY-2005 (Rel. 34, Last amnotation update)
Hypochetical 121.1 Kba protein in BIO3-HXT17 intergenic region Ensembl; YN, TRNG67C; Saccharomyces cerevisiae.
SGD; S0000053SO; DSB4.
GO; GO:000342B; C:cell septum; IDA.
GO; GO:0009277; C:cell wall (sensu Fungi); IDA.
GO; GO:000109; P:cytokinesis, completion of separation; IEP. -!- SIMILARITY: Belongs to the glycosyl hydrolase 81 family Saccharomycetales; Saccharomycetaceae; Saccharomyces, NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA] 1117 AA. ORFNames=N3547;

	* *		· n · 4									*			34; · · · · · · · · · · · · · · · · · · ·	356	3
		φ.			· ·					٠		•			Gaps :		ΕΥΥ
		omyce			arbe C., .		h B.,		IEA.		• •					LKLEK	- I
		of Debaryomyces	отусе	8. 	A., E kaster e Dart	oppi, iri R. ler H. os O.,	lleau A., S., Wirth B., nierry A., Weissenbach J		÷ .					; n 1526	3 279	NLTPSI	
			i). cchar	regol	abour Bley	Kachor Mul	ML., Suleau A., Westhof E., Wirth Ira M., Thierry A., Irdin C., Weissenba		activity; on; IEA.					CRC64; Length	Indels	PSDND	
		date) update CBS76	anseni na; Sa yomyce	Casa	Vegile V. B ne E.,	azer h r P., Ma L. aloger	ML. Westh ara M. ardin		inase rylati				٠ <u>.</u>		285; ISITELG	NDLFVI	: : :
	526 AA	ice up	oora hi iycotii Debar	C DNA	, neu touard , Bey	y-Dum Joyet Ir I.,	traub 1 M., Fukuh Gaill	i	ine k			***	1. UNKKNOWN 1.	6F038; 5; DI	heв SQLTH	MSBLNN	
	PRT; 15	ed) sequence update) annotation update) P of strain CBS767	rulas; charom ceae;	GENOMI re0257 Durre	L. Anti-	, rerr ux N., , Lesu S., Oz	-F., 8 -Louve lotin-		A. threor	AS.			ST; UN	MW; DFSCB86F03820D9C Score 134.5; DB 2; Pred. No. 10;	Mismatches	PLYDFF	 - - -
625 826	P. B.		42g; t) (To a; Sac myceta	SCALE	gle M. kerich	ead C. Jaunia ire M. Oztas	ard G. lowski Y., Bo arpell	: =.	-, Ge ng; IE erine/ mino a	inase. r_pkin r_pkin	H.	Be; 1.	INASE INASE S 2; 1 S REGI	2.9	95; M	 PGFFYE	: :
608 YQRNKRNIEDALNQLFRN : : : 813LENIKSAFDILLQN	ARY;	Qebus; 25-OCT-2004 (TrEMBLrel. 28, Crea! 25-OCT-2004 (TrEMBLrel. 28, Last 25-OCT-2004 (TrEMBLrel. 28, Last Debaryomyces hansenii chromosome	hansenii. OrderediocusNames=DEHAOF16742g; Debaryomyces hansenii (Yeast) (Torulaspora hansenii). Bukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes Saccharomycetales; Saccharomycetaceae; Debaryomyces.	SEQUENCE [LARGE SCALE GENOMIC DNA]: 36239 / CBS 767; 9592; DOI=10.1038/nature02579; herman D., Fischer G., Durrens P.,	A Goffard N., Frangeul L., Marck C., Newveyllbe C., fairs E., A Goffard N., Frangeul L., Batche V., A Barnay S., Blanchin S., Beckerich JM., Beyne E., Bleykasten C., A Boisrame A., Boyer J., Cattolico L., Confanioleri F., de Daruvar A.,	ralrn n C., Lema i M.,	, Potier S., Richard GF., Straub ML., Su , Tekaia F., Wesolowski-Louvel M., Westhof E er M., Zivanovic Y., Bolotin-Fukuhara M., Th , Caudron B., Scarpelli C., Gaillardin C.	Wincker P., Souciet JL.; "Genome evolution in yeasts."; Nature 430:35-44(2004).	241.38; C4639403.1; -; Genomic_DNA. 155224; F:ATP binding; IEA. 14674; F:protein serine/threonine kinase activit: 166468; P:protein amino acid phosphorylation; IEA	hkAl. Prot_kinase. Ser_thr_pkin_AS Ser_thr_pkinase	2. e; 1. 3. TEINBR	PD000001; Prot kinase; SM00220; S TKc; 1. SM00320; WD40; 4. ; PS50077; HEAT REPEAT;	PS50011; PROTEIN KINASE DOM; PS001009; PROTEIN_KINASE_ST; U PS50082; WD REPEATS_2; I. PS50294; WD_REPEATS_REGION;	174291 MW; 3.4%; SC(PTG	:	- XILDRIGELYVIGFITHKSSVPITSIGVSERFFILM-
VIEDALI : VIKSARI	T 12 8 DEBHA QGBL88 DEBHA PRELIMINARY;	(TrEMBLrel. (TrEMBLrel. (TrEMBLrel.	ss=DEHU nsenii i; Asco	SNCE [1	igeul l	neguin neguin nl R.	ler S.	iet J	F:ATP F:Prof	250/; 2719; 2290; 280;	PF02985; HEAT; 2. PF000695; PKinase; 1 PF00400; WD40; 3. S; PR00320; GPROTEIN	S TKC WD40; HEA	E SE		Conservative TGVDAICTHRPD	TILIND!	
ORNKRA	HA PRI	14 (Tri 14 (Tri 14 (Tri 1es har	nii. edLocusName yomyces han yota; Fungi aromycetale TaxID=4959;	SEQUE 29592; 29592; Sherme	Fran Blanc	Kosz Kosz Kosz Kosz	Potj Teke er M.,	Souc	5524; 15524; 14674; 16468;	1FK00035/; IPR000719; IPR008271; IPR002290;	PF02985; HEAT; PF00069; Pkinat PF00400; WD40; S; PR00320; GPR	PD000001; Pro SM00220; S TKC SM00320; WD40; ; PS50077; HEA	PS50011 PS00108 PS50082 PS50294	proteome. 1526 AA; Similarity	Cone	: IDRPSVI	7.T.L.D.K.
608 Y	12 DEBHA BL88_DEE	25-0CT-2004 25-0CT-2004 25-0CT-2004 Debaryomyce8	enii. redLoc ryomyc ryota; haromy	NUCLEOTIDE STRAIN=ATC PubMed=152 Dujon B., 9	ard N. ay S.,	ons L. raye F est A. ud J	Pellenz S., E Swennen D., 7 Zeniou-Meyer Bouchier C.,	ker P., ome evol re 430:3	GO: 0005524; GO: 0004674; GO: 0006468;	InterPro; InterPro; InterPro; InterPro;	S B B B B	~ 88 88 ~		Complete p SEQUENCE ry Match t Local Si	Matches 159;	297 G	157 -
	RESULT 12 QGBL88 DE ID QGBL	25-0CT 25-0CT 25-0CT 25-0CT Debary	hanseni Ordered Debaryo Eukaryo Sacchar NCBI_Ta	STRA Pubm Dujo	Goff Barn Bois	Desp Hant Kerr Nica	Pell Swen Zeni Bouc	Wincker "Genome Nature	988	Inte Inte Inte	Pfam; P Pfam; P Pfam; P Pram; P	ProDom; SMART; SMART; PROSITE	PROSITE; PROSITE; PROSITE; PROSITE;	Complete SEQUENCE Query Match Best Local	atches		
. රු යු	RESUL QEBL8 ID	84448	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	R R R R	\$ \$ \$ \$ \$	\$ \$ \$ \$	\$\$ \$\$	RRT	* # # # #	* # # # # # # # # # # # # # # # # # # #	* # # # #	2222	*****	3 C	ò	음	È
		•									··· ·· ···				*		_
				39;	51 51 263	91				312			639	510	. 560		812
				Gaps	SAASHL :: SNSTQD	GLLRPL : : STVSPV	S-OLTHS		<u> </u>	GPDEPP GPDEPP		DIOOLY DIOOLY	INLSNPD :: LAVA-PS	-HDTFR : HESSFS	TLEYSK	SQDKAQPGTIN	STKST-
	.:	(Potential) (Potential) (Potential) (Potential)	(Potential) (Potential) (Potential) (Potential) (Potential) (Potential)	1117; 233;	IFGPS: 	PSPSILSST	EQLYLELS- : : -TIYVSSSM	YMADMC	NAVSTI TYLQPI		FNSTEGV 	DPVGPGL : : SNLAQGI	IVNWN. : GLIIQLA	IFALPH	YQ	-SODKA	I I QDE
lase;	YNR067C	(Pote (Pote (Pote	(Pote	ngth dels	RSSVSTTSTEGTPTVYLGASKTPASI :: : -SSLTSNKTIYTISVRTNAATATGEDSFIASTPASSTL	FTLNFTITMLRYEENMWPGSRKFNTTERVLQG 	GLDREQ TLDT	TINNLE	-IIVNLENAVSIDE TRVDLLCTYLQPLS	RLGPYSLDKDSLYLNGYNEPG	HLKTLTLNFTISNLQYSEDMGKGSATFN	- OHLLRPLFOKSSMGPFYLGCQLISLRPBKDGAATGVDTTCTYHPDFVGPGLDI 	QNLSIRGEYQINFHI - - - - -SLEVSSEYRIKASASVDGLI	GSQL : ASGSTM	FLDKTLNASFHWLGSTYQ 		LLTVSE
Hydrolas	protein Y				GEDSFI	V	PDPTGPGLD PVSSTLD	PFTLNF	KNGAET	SLAUGVSN 	OYSPDM - SMTM	SSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHP 	GEYQIN : SEYEIK	TTQGES	TLNASF : SLNRQI	TNLPY-	DKYSYI
idase;	al pro	Glcnac Glcnac Glcnac Glcnac	(GlcNAc (GlcNAc (GlcNAc (GlcNAc (GlcNAc (GlcNAc	5; DB 5.4; hes 25	GA NAATAT	-MWPGSRKFNITERV : :: : TLSPSVSLYSTISPI	AICTHR	3VVSEE	-SLSISISSIAITIENSSIT- LGARYTGCRVIALRSVRNGAE	10	FTISNL : FSASNE	EKDGAA :: AKIGSS	ONLSIR	LYK : ryefsy	QVFLDK	-LVDIHVTEMESSVXQPTSSSSTQHFYLNFTITNLPY	YLGKVI
-81. Glycosidase	Potential. Hypothetical Poly-Ser. Poly-Ser.			ווי או	FPTVYLA : FISVRT	VPGSRK SPSVSL	SATGVD	PTTST	TGCRV	SLDK	CTLTLN :	ISLRP	INGYAP	DKVTT SDGSTA	PSLVE - -	SSTOHE	XXNT
ydro_[11; 1.	Hypor Poly	N-linked N-linked N-linked N-linked	~~~~~~~~~		TSTPG NKTIY		RLTLLRPEKOGEA	THRSS	slist	-SQQTHGITRLGPYSLDK	MGYHL!	YLGCQI ATGIYE	GPYVLDRDSLFINGY : : -CYVIGPDDLTSTDF	LLRDIQDKVTTLYK :: : : NFKLQGVSDGSTATYE	FSSNLI : MNGYL1	OPTSS:	ESISG
lyco hydro ecoprot			21064	3.4%; 1.1%; ve	RSSVST ::: -SSLTS	RYEEN- AYPSNE	RLTLLE : -LSSLE	LYVNGE	PLFQRS	OTHGIT ::	SEATTA	SSMGPF	GPYVLI : -CYVIG	-YIT : MYVTNE	VIVKAL : STTKGV	MESSVY	LQVSIS
200; G lyco h e; Gly tein;	1117 345 345	138 138 223 253	280 303 307 393 533 686	, vat	TKLFTH : TKIIP-	FTITNL : STTASP	PLYSGC : NIL	TLDRDS	TKISSS MKHLLS 		TFLPPL	RPLFOK PLVQ-	HGVTQL NGVTWL	YDQAAG	TMDSVL TGIQLA	DIHVTE	EVANSE
IPR005 639; G roteom	342 342 365	276 138 186 223 259	280 303 307 393 533 886	Similarity 6; Conser	PARRARRIKLFTHRSSVSTTSTPGTPTVYLGA - :- :- :- PSYSSQETKIIPSSLTSNKTIYTISVRTNA	LILFTLNFTITNLRYBEN 	FROMTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGPGLDREQLYLELS	ITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQ	SSSSSKQIRISSSSLSISISSIAIIIENSSIIIIVNLENAVSIUE FNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETRVDLLCTYLQPLS : :	IKQVFHELSQQTHGI : : : : HVKEYTHIJIOGGGEDE	TTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNS	QHLLR : DSSNYLEI	WELSQLTHGVTQLGPYVLDRDSLFINGYAPQNLSIRGRYQINFH 	PTSSEYITLLRDIQDKVTTLYKGSQL 	FCLVTNLTMDSVLVTVKALFSSNLDPSLVRQVFLDKTLNASFHMLGSTYQ 		EQLQLIAEVANSELQVSISESISGLNTYYLGKVIDKYSYILLITVSEIIQDEASIKST
InterPro, IPR005200; Glyco hydro Pfam; PF03639; Glyco hydro B1; 1. Complete proteome; Glycoprotein; Hypothetical protein; Signal.	IAS IIAS	HYD HYD HYD HYD	04YD 04YD 04YD 04YD 04YD	atch sal Sin 156;	4 P7	52 LJ 	92 F) 323 YI			415 FL 271 IF 436 TM		369 534 DE	426 WE : 586 YE	480 PJ 640 EJ	511 FG 700 DJ		756 EG
Intel Pfam Compl	CHAIN COMPBIAS COMPBIAS	CARBOHYD CARBOHYD CARBOHYD CARBOHYD	CARBOHYD CARBOHYD CARBOHYD CARBOHYD CARBOHYD CARBOHYD	Query Match Best Local Matches 15													
K K K K		::::::	EEEEEE	Z B E	중 음	8 S	8 8	8 8	8 8 8	8 8 8	8 & 8	දි සි	è 8	දු ද	දි දි	8 8	g

```
LLCTYLOPLSGP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      393
                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                             કે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                            621
                                                                                                                                                                                                                                                                                                                                                        PQN-LSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRD--IQDKVTTLYK--GSQLHDTF 509
                                                                                                                                                                                                                                                                                                                                                                                                                     RFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQV------FLDKTLNASFHWLGSTY 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 560 QLVD-----IHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQR 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       566 RVAIYEBFLRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGP 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----RSSLGARYTG---CRVIALRSVKNGAETRVDLLCTYLQPLSGPGL 269
                                                                                                                                                   270 PIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPTTPKPATTFLPPLSEAT 329
                                                                                                                                                                                                                                                                                                         622 IDVNPMVKISLVMNIMPLCQFF-----GVDKTNDIILPHLITYLNDSNYELRLA 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SVFNDLKAPTKILPYSTNMGKSVYIPKSKNG---FSLNNTNSNIPLSPEDKO-----WVL 884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  611 NKRNIEDALNQLFRNSSIKSYFSDCOVSTFRSVPNRHHTGVDSL----CNFSPLARRVD 665
SYDKIADALQFNYSNDRNSSLSQNSKFV---PLMLNLKGMPKNYTVKPTVTFMENN--YL 411
                                                                                                        EYMDSSSINYQPNNFQTNLSENFTSSSEVACIALTSI----TTLIMSCSYINPIN----
                                                                                                                                                                      KKFWWMSKTPKNDVLKDLNSRLSSKPLLDDKENVSDSYNSPSIRKEQLDSDFENLASKLL
                                                                                                                                                                                                                                                                                                                                       ----VGPGLDIQQLYWELSQLTHGVTQLG------FYVLDRDSLFINGYA
                                                         ----QQGSLIILNLIFSLMKSFKQPLSKIKACELIVALSERVNDDCKLDRCLPYLCNLLD
                                                                                                                                                                                                              TAMGYHLKTL-----TLNFTISNLQYSPDMGKGSATFNS------TEGVLQHLL
                                                                                                                                                                                                                                                                           ---RPLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTT-----CTYHPDP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eichinger L., Pachebat J.A., Gloeckner G., Rajandream M.-A., Burgang R., Berfranski K., Xu Q., Sung J., Olsen R., Szafranski K., Xu Q., Tunggal B., Kummerfeld S., Madera M., Konfortov B.A., Rivero F., Bankier A.T., Lehmann R., Hamlin N., Davies R., Gaudet P., Fey P., Pitcher K., Chen G., Saunders D., Sodergren E., Davis P., Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N., Parbrother P., Desany B., Just E., Morio T., Rost R., Churcher C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NFGKVKVSLQTVQANVFGELDTSHDSSFNASSSHHHHH 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypothetical protein AAC1.
Name=AAC1; ORFNames=DB0201568;
Dictyostelium discoideum (Slime mold).
Bukaryota; Mycetozoa; Dictyosteliida; Dictyostelium.
NCBI TaxID=44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         726 RFEOKLIS------EEDLNMHTGHHHHH 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  797
                              ADMGQPGSL-KFNITDNVMKHLLSPLFQ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-SEP-2005 (TrEMBLrel. 31, 13-SEP-2005 (TrEMBLrel. 31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q54E23_DICDI PRELIMINARY;
Q54E23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=AX4;
                                                                                                                                                                                                                                                                                                                                                                                                   455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        983
                                                                                                                                                                                                                                                                           373
                                                                                                                                                                                                                                                                                                                                       415
                                                                                                                                                                                                                                                                                                                                                                                                                                                              510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DICDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
OS4823 DIC
10 05482
AC 05482
AC 05482
DT 13-88
DT 13-88
DT 13-88
DT 13-88
DT 13-88
DE NAMES
OC BUKAN
OC BUKAN
OC BUKAN
OC BUKAN
RA BUKAN
                                                                                                                                                                                                                                                                                                                                                                                                                     음 중 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                        g
                                                                                                                                                                                                             8 8 8
                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                     8 6
                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                  셤
                                                                                       8 8 8
                    8
```

440 42; 120 255 YSEPYENNVILPFIENVVRYNQTIENFTIKGPPITRINNKSSQQL-----LPSYKLYHST 309 369 -LILNFIISNLQYSPDMGKGSAT----FNSTEGVLQHLLRPLFQKSSMGPFYLGCQLIS- 392 426 473 498 517 177 149 TTTTTTKQIQNTTTSTINHFLPLIIQKEIIFLLVELGSFLNARKVCKYWKKVCNGCVEN 208 LR-YMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETRVD 255 254 297 196 NNILIN 196 Cooper J., Haydock S., van Driessche N., Cronin A., Goodhead I.,
Muzny D., Mourier T., Pain A., Lu M., Harper D., Lindsay R.,
Hauser H., James K., Quiles M., Mohan M.B., Saito T., Buchrieser C.,
Wa Wardroper A., Felder M., Thangavelu M., Johnson D., Knights A.,
Usulseged H., Mungall K., Oliver K., Price C., Quail M.A.,
Urushihara H., Hernandez J., Rabbinowitsch E., Steffen D., Sanders M.,
M. J., Kohara Y., Sharp S., Simmonds M., Spiegler S., Tivoy A.,
M. Sugano S., Malker D., Woodward J., Winckler T., Tanaka Y.,
Shaulsky G., Schleicher M., Weinstock G., Rosenthal A., Cox B.C.,
Milians J., Dear P.H., Noegel A.A., Barrell B., Kuspa A.;
Milliams J., Dear P.H., Noegel A.A., Barrell B., Kuspa A.;
Milliams G., Olollolo. 92 65 48 INIYPTDIHLSASUK-HVSEVPVKSLNSDYFHLQSV-----SFINGAKNSIS | :|: | | :|: ILIKNLLKVLKRLELQKN----QFTNQSAYYLNKV---LSCEQLQLETLNLSSN-:-------GLPIKOVFHELSQQTHGITRLGPYSLDKDS -----LRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQLGF 66 YEENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEA----TGV 121 DAICTHRPDPTGPGLDR----EQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPT 310 SVPSSPPPPPPPPPPPPQIQQPTITAPTSTTAIAVSSTTTTTATGQTLINNNNNNNNIPKGLNY 441 YVLDRDSLFI--NGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQDKVTT LYKGSQLHDT-----FRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTL RRARRIKL FIHRSSVSTISTPGIPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLR PKYSLFNEPNNDNDT-----NSSTRP---NKQQKLLKSNESTTSTTTTFPI RTSNRNEEATAKLSSSTTITTTTTNKYYNMANAEKS-------SKSTTISNLI Gape LYLNGYNEPGPDEPPTTPKP-----ATTFLPPLSEATTAMGYHLKT------299; -!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which preliminary data. Length 797; Indels Pfan, PF00560, LRR 1, 2.
PRINTS; PR0019; LEURICHRPT.
SMART; SM00368; LRR H.
Hypothetical protein; Leucine-rich repeat; Repeat.
SEQUENCE 797 AA; 89497 MW; OCCB0676C5C581FF CRC64; TSTGVVSEE-------PPTL------Best Local Similarity 19.2%; Pred. No. 5.2; Matches 173; Conservative 118; Mismatches 311; DB 2; EMBL; AAFT01000264; EAL61460.1; -; Genomic_DNA. InterPro; IPR001611; LRR. InterPro; IPR007091; LRR.RNinh. InterPro; IPR003590; LRR.RNinh_sub. 3.4%; Score 132.5; E 19.2%; Pred. No. 5.2; SO OR REPLY OF SO OR SO

```
R7_DICDI
Q54JR7_DICDI PRELIMINARY;
Q54JR7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE.
             Best Local Similarity
Matches 127; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=AX4;
                                                                                                                                                                                        245
                                                                                                                                                                                                                                                                                                                                                                                                                  441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            552
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
                                                                                                                                                       셤
                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                          ò
                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RA Sucgang R., Berriman M., Song J., Olsen R., Szafranski K., Xu Q., Sucgang R., Berriman M., Song J., Olsen R., Szafranski K., Xu Q., RA Sucgang R., Berriman M., Song J., Olsen R., Szafranski K., Xu Q., RA Thuggal B., Kummerfeld S., Madera M., Konfortov B.A., Rivero F., Ra Bankier A.T., Lehmann R., Hamlin N., Davies R., Gaudet P., Fey P., RA Pilcher K., Chen G., Saunders D., Sodegren B., Davis P., Rarborther P., Desany B., Just E., Morio T., Rosk R., Churcher C., Rarborther P., Desany B., Mozio D., Haydock S., van Driessche N., Cromin A., Goodhead I., Ansar H., James K., Quiles M., Mohan M.B., Saito T., Buchrieser C., Rardroper A., Felder M., Thangavelu M., Johnson D., Knights A., Loulseged H., Mungall K., Oliver K., Price C., Quail M.A., Gulseged H., Mungall K., Oliver K., Price C., Quail M.A., Mungall K., Oliver K., Price C., Quail M.A., Mandan Y., Kohara Y., Sharp S., Simmonds M., Spiegler S., Tivey A., Walker D., Woodward J., Winckler T., Tanaka Y., Shallsky G., Schleicher M., Weinstock G., Rosenthal A., Cox E.C., Chilsholm R.L., Gibbs R., Loomis W.F., Platzer M., Kay R.R., Williams J., Dear P.H., Noegel A.A., Barrell B., Kuspa A.; Milliams J., Dear P.H., Noegel A.A., Barrell B., Kuspa A.; Marre Olo Olozob.
                                                                                                        690
                                                                          623
                                                                                                                                                          574 KPVDLSFNKINSNFGLDHLVSSLLINHSIHSISLQSNQIDNTSAITLSQLFNSSRQLFSF 633
                                                                                                                                        RNSS-----IKSYFSDCQVSTFRSVPNRHHTGVDSLCNPSPLARRVDRVAIYEEFLRMT 677
                                                                                                                                                                                                       RNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEG-----PRFEQK 730
                                                                                                                                                                                                                                     SNDTN-QNDNI------NNENNLTRISIDL---SSNSPLEVSKVIGLIPRYKSK 778
                                                                                                       634 FKYLNLSGNKIGIGGLKKLINDLSKYSKTHIIYNNNDDNNNNKNENENKSKIK---NLSF
                                                                          -----FTITNLPYSQDKAQPGTTNYQRNKRNIEDALNQLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hypothetical protein; Repeat.
1230 AA; 139239 MW; 6F9B094941E6BD2C CRC64;
             ---NASFHWLGSTYQL------VDIHVTEMESSVYQPTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dictyostelium discoideum (Slime mold).
Eukaryota; Mycetozoa; Dictyosteliida; Dictyostelium.
                                                                                                                                                                                                                                                                                                                                                                                                                Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAFI01000263; EAL61520.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                  PRT; 1230 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS50297; ANK REP REGION; 1.
PROSITE; PS50088; ANK REPEAT; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR002110; ANK.
InterPro; IPR000354; Involucrin_rpt.
InterPro; IPR002017; Spectrin.
Pfam; PP00023; Ank; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                  13-SEP-2005 (TrEMBLrel. 31,
13-SEP-2005 (TrEMBLrel. 31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PRO1415; ANKYRIN.
                                                                                                                                                                                                                                                                                                                                                                                Q54E54 DICDI PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                13-SEP-2005 (TrEMBLrel.
13-SEP-2005 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel.
                                                                         ---XTN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00248; ANK; 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hypothetical protein.
ORFNames=DDB0184069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   preliminary data.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=44689;
                                                                                                                                                                                                                                                                                                  L 779
                                                                                                                                                                                                                                                                    731 L 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=AX4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ANK repeat;
SEQUENCE
                                                                                                                                        624
                                                                                                                                                                       691
                                                                                                                                                                                                     678
                                                                                                                                                                                                                                     735
                                                                                                                                                                                                                                                                                                 779
                                                                          586
                                                                                                                                                                                                                                                                                                                                                                                                   Q54B54;
                                                                                                a
                                    셤
                                                                       8
                                                                                                                                      δ
                                                                                                                                                          셤
                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                 셤
```

```
440
                                                                                                                                    303 NNSLQKFAQT-----YNTIEHQQQQLMSQPLHRVTGNLTNSIEEDDB 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                       345 DDNGKLKKKKKSKSPIPTSSSAKVRPTSSSPVSSKWTTKSKELTQKEKSSEKVRKAIEE 404
                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           446 DSLFI------NGYAPQNLSI---RGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        251 NNNNNNYSVPNYSP-----VTN--LDHIPSSPLSNNSIPSSPYQNPNAPSLQIDEIAM 302
                                                                                                                                                                                                                                                                                                                                                                                                        299 YLNG-----YNRPGPDBPPTTPKPATTFLPPLSRATT--------AMGY 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        335 HLKTLTLTLNFTISNLQYSP-DM--GKGSATFNSTEGVLQHLLRPLFQKSSMGPFYLGCQLI 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           392 SLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQL-----YWELSQLTHGVTQLGFYVLDR 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             565
                                                                                                     137 REQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEE-----PFTLN 191
                                                                                                                                                                                                                                                                                                     --SVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHE----LSQQTHGITRLGPYSLDKDSL 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ------EK 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           494 DKVTTLYKGSOLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFL--DKTLNAS 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FHWLGSTYQLVDIHVTEMESSV---YQPTSSSSTQHFYLNFTITNLPYSQDKAQPGT--- 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              606 --TNYQRNKRNIEDALNQLFRNSSIKSYPSDCQV----STFRSVPNRHHTGVDSLCNFSP 659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660 LARRVDRVAIYBEPLRMTRNGTQLQNPTLDRSSVLVDGYSPNRNBPLTGNSADIQHSGGR 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        515 DG-NPLYLGNIISDQIRYCYHT----SSLPNPKIEF---ISPSMVNPLALVPKLELNSS
                                                                                                                                                                                                     192 FTINNLRYMADMGQPGSLKFNITDNVMKHL-LSPLFQRSSLGARYTGCRVIALR----
                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bichinger L., Pachebat J.A., Gloeckner G., Rajandream M.-A., Sucgang R., Berriman M., Song J., Olsen R., Szafranski K., Xu Q., Tunggal B., Kummerfeld S., Madera M., Konfortov B.A., Rivero F., Bankier A.T., Lehmann R., Hamlin N., Davies R., Gaudet P., Fey P., Pilcher K., Chen G., Saunders D., Sodergren E., Davis P.,
                                                   Indels 218;
       DB 2; Length 1230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          405 HKKRLSLPYDIPTIEFLPRDLIPEPNSVTNN-----HIITP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | | | : : : | : | 468 DKFKIDYTKEHFEWDGYATFNIKIEKPKGNEKTEFFKIRYDLFCED-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-SEP-2005 (TrEMBLrel. 31, Created)
13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
Hypothetical protein.
ORRNames-DBB018765;
Dictyostelium discoideum (Slime mold).
Eukaryota; Mycetozoa; Dictyostelium.
3.3%; Score 131; DB 2; L
llarity 18.5%; Pred. No. 13;
Conservative 96; Mismatches 244;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1447 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   115 GGNDGFSF----NNYSLNVNGGNN 734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720 SSLEGPRFEQKLISEEDLNMHTGHH 744
```

```
LQITNMEKYS----SVSINGRIQDDSN-----GNFFMLPVISGEIIYXDKSTQCIG- 1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . --KVNFNFDFDFLTTATPLSTNFNTFFTCHGSCDGTLQ----ISNNILNETYYHY 1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1097 SSISIRENSKRFLT------PFKPSMSSGINYYGISTTNLLFNEIGKSNPFCIIS 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1284 TNNAFLIKLDTTNYCEAVRIVPFNMNLLFNYYITNSSGGLVYQYLNKTGVVISDYLDSEM 1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----EHPQEDDD--QEEIDEN 1437
Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
Farbrother P., Desany B., Just E., Morio T., Rost R., Churcher C.,
Cooper J., Haydock S., van Driessche N., Cronin A., Goodhead I.,
Muzny D., Mourier T., Pain A., Lu M., Harper D., Lindsay R.,
Hauser H., James K., Quiles M., Mohan M.B., Saito T., Buchrieser C.,
Wardroper A., Felder M., Thangavelu M., Johnson D., Knights A.,
Loulseged H., Mungall K., Oliver K., Price C., Quail M.A.,
Urushihara H., Hernandez J., Rabbinowitsch E., Steffen D., Sanders M.,
M. J., Kohraa Y., Sharps S., Simmonds M., Spiegler T., Tanaka Y.,
Shaulsky G., Schleicher M., Weinstock G., Rosenthal A., Cox B.C.,
Chisholm R.L., Gibbs R., Loomis W.F., Platzer M., Kay R.R.,
Williams J., Dear P.H., Noegel A.A., Barrell B., Kuspa A.;
"The genome of the social amoeba Dictyostelium discoideum.";
"The genome of colloss."

"The genome of the sequence shown here is derived from an EMBL/Genbank, DBBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      128 -TYKLVN---TNTPSSIIPSTSNSIADYDNLSFGNYLLTASITNKQCKRSLVQSFKLDNT 1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TIPIPITITITIINNSP---FVINNLQ----SGQYSALVKWN---SVCGSVL-PIVIK 970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   335 HLKTLTLNF-----TISNLQYSPDMGKGSAT-FNSTEGVLQHLLRPLFQKSSMGPFYLGC 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   389 QLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQLG----FYVLD 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RDSLFINGYAPONLSIRGEYQINFH----IVNWNLSNPDPTSSEYITLLRDIQDKVTTL 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----GTTNYQRNKRNIEDALNQLFR----NSS------IKSYFSDCQ 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THRSSVPITSTGVVSEEPFILNFIINNLRYMADMGQPGSL-KFNIIDNVMKHLLSPLFQR 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SSLGARYTGCRVIALRSVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHE----LSQQTH- 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----VSPITPPP-PTFTITHDTSTCLSDYNYH 998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     284 -GITRLGPYSLDKDSLYLNGYNEPGPDEPPTTPKPATTFLPPLS------EATTAMGY 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           695 VDGY-----SPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNMH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---YKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFHWLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STYQLVDIHVTEMESSVYQPTSSSSTQHFYLNF-----TITNLPYSQDKAQP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             637 VSTFRSVPNRHHTGVD--SLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQNFTLDRSSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93; Mismatches 206; Indels 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2; Length 1447;
                                                                                                                                                                                                                                                                                                                                                                                                                  COAB251B9CA32CBB CRC64;
                                                                                                                                                                                                                                                                                                                                          preliminary data.

EMBL, AAFIO1000157; EAL63563.1; -; Genomic_DNA.

Hypothetical protein.

SEQUENCE 1447 AA; 157511 MW, CARBIELEGARDA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1393 VAAFIIVYAIYKLRQRQIKKNNNEKLKEN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                        3.3%; Score 131; Di
9.8%; Pred. No. 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 19.8
Matches 132, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           741 TGHHH 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
        원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
```

1438 YRHHN 1442

```
276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----NVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETRVDLLCTYLQPLSGPGLP 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IKOVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPTTPKPATTFLPPLSEATT 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  331 AMGYHLKTLT-LNFTISNL-QYSPDMGKGSATFNSTEGVLQHLLRPLFQKSSMGPFYLGC 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSDOKVYSSKLYLTWINFNDSIQITSSDIYLVNVPNIKD------TFNLTNDNFYMS 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314 SKSFIKLDHSTLMNVVQNISSSTAQVIYSNLQNAVADLYGSTFTITNSVNDLVNSKIYNS 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MWPGSRKFNTTERVLQGLL----RPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICT 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HRPDPTGPGLDREQLYLELSQLTHSITEL--GPYTLDRDSLYVNGFT------HRSSV 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QLISLRPEKDGAATGVDTTCTYHPDPVGPGLD--IQQLYWELSQLTHGVTQL-----G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            374 QITLENSNLSAVNTVIQN-SVQNIXSSGVNLKNTVISGSTITAQSTVINANNVTILSSTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SLIGSTAYVSNS-----KFSQVVLKSSNSNLYTSNSNIGIINSNIVNSLAQIINSQSSVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THITAQTPKNTPITILYIKNSVQRLYNSTLTNAILYVYNSILYTYNSSFINVKIYIYNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ------ripgpsixiss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----TILISVGTTVQNVKQYAND----SSTLN-------LEKTNIINTFVGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         440 FYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPT-----SSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DKV-TTLYKGSQLHDTPRFCLVTNLTMDSVLVTVKA---LPSSNLDPSLVBQV----PL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             545 DKTLNASFHWLGSTY----QLVDIHVTEMESSVYQPTSS-SSTQHFYLNFTITNLPYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19 SVSTTSTP-GTPTVYLGASKTPASIFGPSAASHLL----ILFTLNFTITNLR---YEEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            176 PITSTGVVSEEPF---TLNFT-----INNLRYMADMGQPGSLKFNITD-----
                                                                                                                                                                                                                                                                          Torarinsson
                                                                                                                                    Sulfolobus acidocaldarīus.
Archaea; Crenarchaeota; Thermoprotei; Sulfolobales; Sulfolobaceae;
                                                                                                                                                                                                                   NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN-ATCC 33909 / NCIB 11770 / DSM 639;
PubMed=15995215; DOI=10.1128/JB.187.14.4992-4999.2005;
Chen L., Bruegger K., Skovgaard M., Redder P., She Q., Torarin Greve B., Awayez M., Zibat A., Klenk H.-P., Garrett R.A.;
"The genome of Sulfolobus acidocaldarius, a model organism of Crenarchaeota.";
                                                                                                                                                                                                                                                                                                                                                                                                                             3.2%; Score 128; DB 2; Length 879; 18.6%; Pred. No. 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                           J. Bacteriol. 187:4992-4999 (2005).
EMBL. CP000077; AAY81501.1; -; Genomic_DNA.
Complete proteome; Hypochetical protein.
SEQUENCE 879 AA; 93653 MW; 77081EB79751DCIC CRC64;
                                                                     Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 18.6%; Pred. No. 12;
Matches 152; Conservative 123; Mismatches 285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              233 NFLLRNTVNYLNNVDFYNSSIS-----IISSSVLTNG
                   Ź
                 879
                                                   Created)
                 PRT;
                                              13-SEP-2005 (TrEMBLrel. 31, 13-SEP-2005 (TrEMBLrel. 31, 13-SEP-2005 (TrEMBLrel. 31, Hypothetical protein.
                                                                                                                    OrderedLocusNames=Saci_2215;
                 SULAC PRELIMINARY;
                                                                                                                                                                                        NCBI_TaxID=2285;
                                                                                                                                                                           Sulfolobus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          389
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
```

Db 3934 SITRIGGIITYTVAVTNAGTIPITNTLLLDAIASGTTFVPNSILVDGVFRP 3984 Qy 309 DEPPTTPRPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQVSPDMGKGSA 359	WINDELS-NPDFTSSEYITLLRDIQDKVTTLYKGSQLHDTPRFCLVTN STSYTL-TWIPPTPATAIN STATEMENT STATEMEN	20.6%; Pred. No. vative 120; Mismatc TPGTPTVYLGASKTPASIFGE TPVTTNVKGGGTDFPDI TTERVLGGLRPLFKNTSVGF	בס לומנסחת בסתו והסקור הסקור הסקור הסקור החמר ביים מסחו אימני יייציס מייני מסחות מסקור הסקור אימני יייציס מייני הסקור
Db 488 DSTISSTNIYLSNSVLAAQGSSIINCNQNIQSSTVYLTNSQLSSGSGVANITGTNLYLS 547 CY 598 QDKAQPGTTNYQRNKRNIEDALNQLFRNSSIKSYFSD 634 Db 548 GSSITGVTQNIRNSMVSLTNTQISSSNVNMVGSTLSASGSTITNSNQNIQGSTIYLSN 605 CQY 635 CQVSTFRSVPNRHTTGVDSLCNFSPLARRVDRANIYEFFLRMTRNG 680	RESULT 17 081FOLD BACCR TO GOILD CONTRIBUTION TO THE TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TO THE TOTAL TOTAL TOTAL TO THE TOTAL	Db 3761 : : : : : : 3820 Oy 156 PYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBPTILMTIT-N 195 Db 3821 TVPANNIVFIDNIPEDTIFIEDELAINNVIQPGVNPENGVILGTIQPNETVTISFQVQLT 3880 OY 196 NLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSL-GARYTGCRVIALRSVK-NG 249 Db 3881 NIPEGNTVINISDTSYEYQIDPSSFIIQRRSLSNAVNTEVRTANVSAIKSANR 3933	230 ABIKVDEBCIILŲKEDGERG-EFINŲVERBEBGŲĮIRGIIKEGE ISEDAUSBILMGINEFGE

```
Gaps 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | | | : : | | : : | | : : | | | : : | | | : : | | | : | : | : | | | : : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : | : : : : | | | | | 439 SDIXTLKGFSNILRYESIVEEDNVVFETVFDFFKN-YGLGNFYIFDSLNRMKSYLNNN 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SPDMGKGSATFNSTEGVLQHLLRPLFQKSSMGPFYLGC-QLISLRPEKDGAATGVDTTCT 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YHPDPVGPGLDIQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFH 469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          270 YQP-----SLINGLGTGNIQIYPLYEINKM 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OHFYLNFTITNLPYSQDKAQPGTTNYQRNKRNIEDALNQLFRNSSIKSYFSDCQVSTFRS 642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           643 VPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQNF----TLDR-SSVLVDG 697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          107 GVQVFSRFSLNHSINN-----SISLNFICQAIDYTKLDYKLMVNNRFKRST--S 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----YLOFTS--EYPLGOL--EYSSNTSGVLSNTIENT 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            299 ATYIGMFDGAVTPS-YYTLFSQSDNSLTEIYK-----VENLTVTKKQSFST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GVVSEEPFILNFTINNLRYMADMGQPGSLKFNI-----TDNVMKHLLSPLFQRSSLGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         234 RYTGCRVIALRSVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGI---TRLGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           291 YSLDKDSLYLNGYNEPGPDEPPTTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              470 IVNWNLSNPDPISSEYITLLRDIQDKVTTLYKGSQLHDTFRFCLVTNLTMD-----SV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       523 LVTVKALFSSNLDPSLVEQVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VVIATYLHGNN-----ETLYNSSMYTISFN--SGILKQVDFFPT-----VYRFQSSSS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.2%; Score 127; DB 2; Length 1364;
21.1%; Pred. No. 28;
ive 65; Mismatches 190; Indels 172;
                                                                                                                                                  Baungart C.;
Submitted (MAR.2003) to the EMBL/GenBank/DDBJ databases.
Submitted (MAR.2003) to the EMBL, Genbank DDBJ databases.
EMBL, AC116984; AAO51349.1; -; Genomic_DNA.
InterPro; IRR006209; EGF_1; UNRNOWN_1.
PROSITE; PS01086; EGF_1; UNRNOWN_1.
Hypothetical protein. 153737 WW; 3A194428A8D7DD8F CRC64; EQUENCE 1364 AA; 153737 WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dictyostellum discoideum (Slime mold).
Eukaryota, Mycetozoa, Dictyostellida, Dictyostellum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-SEP-2005 (TrEMBLrel. 31, Created)
13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
Hypothetical protein.
ORFNames=DDB0206085;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 21.1$
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q54V40_DICDI PRELIMINARY;
Q54V40;
Nature 418:79-85(2002)
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [1]
NUCLEOTIDE SEQUENCE.
                                                                                  NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ¥ 698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Y 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        154 NYGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=AX4;
                                                                                                                          STRAIN=AX4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DICDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q$54V40

ID Q$5

Q$5

D$T 133

          SKARBARRARA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |: || |: :| || 434 TFVQLFLFNFWKHVDALNEDLANEILLLANSVLDSYPNLVSVFAKYISQFTNSSESNNTY 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ASKLIMSSDVTTTLPRINKLKYSNSMLD-LIANLS---LINNQYTVND---TDYR---YNTO 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YNNHTDYDTFYKDNKLKLEPWNQDKFVQDLTRL-----TLMSAFINHCWKELISTL 654
                                                                                                                                                                                                                                                                            241 IALRSVKNGAETRVDLLCTYLQPL--SGPGLPIKQVF--------HELSQQTHGIT 286
                                                                                                                                                                                                                                                                                                                                                   VVĽYML-----LLĊTLEKLLWFSEPQLPYDDFFSVFAFIICSFVESATŠKSTHQKD 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         287 LTNNTQPGKDSVL-----TDKPGTSRK--NDLIPAMASNTDMLVRHLSVVCF---LL 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GEYOI --- NF -- HI -- VNWNLSNP --- -- 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---DPTSSEYITLLRDIQDK---VTT-----LYKGSQLHDTFRFCLVTNLTMDSVLV 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TVKALFSSNLDPSL-----VEQVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPT 577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SSSSTQH--FYLNFTITNLPYSQDKAQPGTTNYQRNKRNIEDALNQLFRNSSIKSYFSDC 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QVST----FRSVPNRHHTG----VDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQNFT 687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LDRSSVLVDGYSPNRNEPLTGNSADIQ-----HSGGRSSLE-----GPRFEQK 730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NLOYSPDMGKGSATFNSTEGVLOHLLRPLFOKSSMGPFYLGCOLISLRPEKDGAATGVDT 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTYHPDPVGPGLDI-QQLYWELSQLTHGVTQLGFYVLDRDSLF----INGYAPQNLSIR 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .----- 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-22092622; PubMed=12097910; DOI=10.1038/nature00847; Gloeckner G., Eichinger L., Szafranski K., Pachebat J.A., Bankier A.T., Dear P.H., Lehmann R., Baumgart C., Parra G., Abril J.F., Guigo R., Kumpf K., Tunggal B., Cox E., Quail M.A., "Sequence and analysis of chromosome 2 of Dictyostelium discoideum.",
   | | | :: | :: | :: | :: | ETG-----QYYTQYTRSEVTFEALNEMSLFTKDHMKSLSILVVLGNHHMLANLEGLRT--
                                                                                                                                                                     RLGPYSLDKDSLYLNGYNEPGPDEPPTTPKPATTFLPPLSEATTAMGYHLKTLTLNFTIS
                                                                                                                      VSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVMKHLLSPLF--QRSSLGARYTGCRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-JUN-2003 (TrEMBLrel. 26, Last annotation update)
Similar to Dictyostelium discoideum (Slime mold). Hypothetical 127.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               655 MSKTGPKLFEYOKNRPHINGFERVDS-GKLNKAVEGYDRKDVYKNYNRM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dictyostelium discoideum (Slime mold).
Eukaryota, Mycetozoa, Dictyosteliida, Dictyostelium.
NCBI_TaxID=44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT; 1364 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QBGALB_DICDI PRELIMINARY;
Q8GALB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LISEEDLINMH 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ::| | | |
VLSYEALRAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     kDa protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=AX4;
                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                  287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     704
                                                                                                                                                                                                                                                                                                                                                       236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DICDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 19
086AL8 DIC
086AL AC
086AL DT 01-JT
DT 01-JT
DT 01-JT
DE SIMIJ
DE KDA 1
OX NCBT
RN NCBT
RN NUCL
RA MEDL
RA BANK
RA ADTI
```

g

ઠે

ò

상 임

6 B 셤

g ઠે 셤 ò

à

8 6 8 6

8 8

셤

8 8

ઠે

522 345 582 391

```
A Sucgang R. Berriman M. Song J., Olsen R., Safranski K., Xu Q. A Sucgang R., Eberriman M., Song J., Olsen R., Safranski K., Xu Q., A Bankier A. T., Lehmann R., Hamlin N., Davise R., Gauder P., Fey P., A Pilcher K., Chen G., Saunders D., Sodergren B., Davis P., Bason N., R. Farbrother P., Debsary B., Just E., Morio T., Rost R., Churcher C., Rost R., Churcher R., Chulseged H., Mungall K., Ollver K., Price C., Quail M.A., Androper A., Felder M., Thangavelu M., Johnson D., Knights A., Loubiaged H., Mungall K., Ollver K., Price C., Quail M.A., Androper A., Sharp S., Simmonds M., Sphegler S., Tivey A., R. Sharlsky G., Schleicher M., Weinstock G., Rosenthal A., Cox B.C., R. Shallsky G., Schleicher M., Weinstock G., Rosenthal A., Cox B.C., R. Shallsky G., Schleicher M., Weinstock G., Rosenthal A., Cox B.C., R. Williams J., Dear P.H., Noegel A.A., Barrell B., Kuspa A.; Mature O.0-012005).

C. -I- CAUTION: The sequence shown here is derived from an Emblicher M. Cox B.C., Challians J., Dear P.H., Moley G., Challians J., Challes M., Shallsky G., Schleballsky G., Schleballs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        153 BLGPYTLDRDSLYVN-----GPTH-----RSSVPTTSTGVVS------EEPP 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189 TLNFTINNLR--YMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSV 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TPSITIGNKQCTYIKSNTNELKCKLDPNQNGGKNL------PVNVNFGGCNSINPHSV 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    247 KNGABTRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGP-YSLDKDS---LYLNG 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303 YNE-----PGPDEPPTTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDM 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       355 GKGSATFNSTEGVLQHLLRPLFQKSSMG--PFYLGCQL-ISLRPEKDGAATGVDTTC--- 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                464 TSNTISISASSLLINVINRPNLSNGSLNIEIYYMDCPISSSSQPSITVGNSSSSTQCSTP 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----TYHPDPVGPGLDIQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQN 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----ISDEYS----YAPPN 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         569 IENRKPSKGQYNITPYGNNFGNSISYIKVYFNGNDISSEILTITNNOLTIKTLNSYENGP 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LSIR----GEYQINFHIVNWNLS-----NPDPTSSEYITLLRD-IQDKVTTLYKGSQ 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3.2%; Score 126.5; DB 2; Length 885;
21.9%; Pred. No. 16;
tive 61; Mismatches 151; Indels 141; Gaps
Pachebat J.A., Gloeckner G., Rajandream M.-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hypothetical protein.
SEQUENCE 885 AA; 97603 MW; B19A14755A85D5D8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                preliminary data.
EMBL; AAF101000068; EAL67119.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 21.9
1es 99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            505
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
```

Search completed: March 20, 2006, 07:32:02 Job time : 147.158 secs

THIS PAGE BLANK (USPTO)

protein

Σ

Run on:

Sequence:

```
Sequence 4421, Åp. Patent No. 5455158 Sequence 235, App. Sequence 12, App. Sequence 12, App. Sequence 1, App. Sequence 501, App. Sequence 550, App.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Appl
Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42083, A
6058, Ap
52, Appl
52, Appl
sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-604-107A-8
US-09-360-237-53
US-10-198-053-598
US-09-213-888-27
US-09-328-877D-27
US-09-134-001C-3159
US-09-134-001C-3159
US-09-469-039A-9243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-198-452A-501
US-09-949-016-9550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-545-814-32
US-10-198-053-597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-551-356-2
PCT-US93-12687-2
US-09-071-710-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-360-101-235
09-016-366A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -09-431-384B-31
                                                                                                                                                                                                                                        651.5
637.5
611.5
600.5
5599.5
5598.5
5598.5
5598.5
5885.5
5885.5
583.5
577.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           564
485.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   156
146.5
144.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121.5
118.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           118
117.5
117.5
117.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              116.9
112.9
112.9
112.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            161.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ላላው የተመሰመ የ
                                                                                                                                            March 20, 2006, 07:30:27; Search time 39.8343 Seconds (without alignments) 1552.466 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 389,
                                                                                                                                                                                                                                                                                    AAQPARRARRIKLFTHRSSV.....QKLISEEDLNMHTGHHHHH 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-404-879A-389
US-09-667-857-389
US-10-198-053-389
US-09-404-879A-312
US-09-388-933-312
US-09-388-933-312
US-09-667-857-312
US-10-198-053-478
US-10-198-053-479
US-10-198-053-458
US-10-198-053-459
US-09-827-271-458
US-09-827-271-459
US-09-667-857-388
US-09-667-857-388
US-09-667-857-388
US-09-667-857-388
US-09-667-857-388
US-09-667-857-388
US-09-667-857-388
US-09-667-857-390
                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                              572060 segs, 82675679 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                       protein search, using sw model
                                                                                                                                                                                                                                                                                                                             BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                    US-10-687-035-1
3945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         914
914
3451
1148
1148
11148
1156
1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
Match 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing:
                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
```

Minimum DB & Maximum DB &

Database

Result No.

searched:

```
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
à
                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DKVTTLYKGSQLHDTFRFCLVTNLIMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        258 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SRKPNITERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GVTOLGFYVLDRDSLFINGYAPONLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                 14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    618 WLGSIYQLVDIHVTEMESSVYQPISSSSIQHFYLNFIITNLPYSQDKAQPGTINYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                 FTHRSSVSTTSTPGTPTVXLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGRATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                     THE THERAPY AND
                                                                                                                                                                                                                                                                                                                                                            Length 833;
                                                                                                                                                                                                                                                                                                                                                                                       1; Indels
                                                   RESULT 1
US-09-404-B79A-389
| Sequence 389, Application US/09404879A
| Patent No. 6468546
| GENERAL INFORMATION:
| APPLICANT: Mitcham, Jennifer L.
| APPLICANT: Algate, Paul A.
| TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER FILE REFERENCE: 210121.462C2
| CURRENT PLILNG DATE: 1999-09-44 NUMBER OF SEQ ID NOS: 393
| SOFTWARE: FastSEQ for Windows Version 3.0
| SEQ ID NO 389
                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                                                                                         Score 3663; DE
Pred. No. 0;
0; Mismatches
                ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                         92.9%;
                                                                                                                                                                                                                                                                                                                                                                                       Matches 696; Conservative
                                                                                                                                                                                                                                                                                                    ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-404-879A-389
                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     연
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
```

```
VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLXWELSQLTH 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLFQKSSMGPFYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FTHRSGVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENNWPG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SRKFWITERVLQGLLRPLFKNISVGPLYSGCRLITLLRPEKDGBATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGPTHRSSVPTTSTGVVSEBPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        258 INNIRYMADMGQPGSLKENITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         318 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INNLRYMADMGQPGSLKFNITDNVMXHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THE THERAPY AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 3663; DB 2; Length 833;
Pred. No. 0;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                          APPLICANT: Micham, Jennifer L.
APPLICANT: Ming, Gordon E.
APPLICANT: Ming, Gordon E.
APPLICANT: Fling, Steven P.
APPLICANT: Fling, Steven P.
APPLICANT: Retter, Marc W.
APPLICANT: Reded, Steven G.
APPLICANT: Reded, Steven G.
APPLICANT: Carter, Darrick
TITLE OF INVENTION: DARRICK
TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER;
TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER;
TITLE REFERENCE: 210121.462C5
CURRENT APPLICATION NUMBER: US/09/667,857
CURRENT APPLICATION NUMBER: 2000-09-20
NUMBER OF SEQ ID NOS: 455
SOFTWARE: FastSEQ for Windows Version 3.0
SSEQ ID NO 389
                                       738 LRMTRNGTQLQNFTLDRSSVLVDGYFPNRNEPLTGNS 774
                                                                                                                                                                   Sequence 389, Application US/09667857
Patent No. 6699664
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-667-857-389
674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
```

373

377

193

133

73

```
558 DKVTTLYKGSQLHDTPRPCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 617
                                      WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 613
                                                       678 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                78 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74 SRKFNTTERVLOGILLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           378 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTTTNLRYEENMWPG 73
                                                                                                   614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLPQKSSMGPFYLGCQLISLRPBKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGABTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               258 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             254 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                318 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                       Sequence 389, Application US/09827271
Fatent No. 6962980
GENERAL INFORMATION:
APPLICANT: Retter, Marc W.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER
FILE REPRENCE: 21021.46256
CURRENT APPLICATION NUMBER: US/09/827,271
CURRENT FILING DATE: 2001-04-04
NUMBER OF SEQ ID NOS: 461
SOFTWARE: FastSEQ for Windows Version 3.0
LENGTH: 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 833;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IndelB
                                                                                                                                                                    LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                      LEMIRNGTQLQNFTLDRSSVLVDGYFPNRNBPLTGNS 774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92.9%; Score 3663; D
99.9%; Pred. No. 0;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                 -09-827-271-389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-827-271-389
                                      554
                                                                     618
                                                                                                                                                                    674
                                                                                                                                                                                                    738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           494
                                                         셤
                                                                                                                             임
                           8
                                                                                                   ò
                                                                                                                                                                    Š
                                                                                                                                                                                           음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       윱
                                                                   673
                                                                                 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGRATGVDAICTHRPDPTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSBEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          258 INNLRYWADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           318 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPFT 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DXVTTLYKGSQLHDTPRFCLVTNLTMDSVLVTVKALPSSNLDPSLVEQVFLDKTLNASPH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
NIEDALNOLPRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            198 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPPTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VDLLCTYLQPLSGPGLP1KQVFHELSQQTHG1TRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 92.9%; Score 3663; DB 2; Length 833; ll Similarity 99.9%; Pred. No. 0; 696; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                               METHODS FOR THE OVARIAN CANCER
                                                                                                                                                 LEMIENGTOLONFILDRSSVLVDGYFPNRNEPLIGNS 774
                                                                                                                                                                                                                                     Sequence 389, Application US/10198053
Patent No. 685870
GERERAL INFORMATION:
GERERAL INFORMATION:
APPLICANT: Bangur, Chaitanya S.
APPLICANT: Reter, Marc W.
APPLICANT: Fanger, Gary R.
APPLICANT: Hill, Paul
APPLICANT: Hill, Paul
TITLE OF INVENTION: COMPOSITIONS AND METHODS
TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN
FILE REFERENCE: 210121.462C9
CURRENT APPLICATION NUMBER: US/10/198,053
CURRENT FILING DATE: 2002-07-17
NUMBER OF SEQ ID NOS: 624
SOFTWARE: FeatESEQ for Windows Version 4.0
SEQ ID NO 389
LENGTH: 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-198-053-389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 696
                                                                                              678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        378
                                                                                                                              674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      494
                    8 & 8
 ઠ
                                                                                                                             8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
```

257

253 317 313 373

497

8 8 g Š 셤 ò 셤

```
398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            278
                                                                                         673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193
                                                                                                                 818
                                       613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGPTHRSSVPITSTGVVSEEPPTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INNIRYMADMGQPGSLKFNITDNVWKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   399 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGFDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SRKFNTTERVLQGLLRPLFRATSVGPLYSGCRLTLLRPEKDGBATGVDAICTHRPDFTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIEDALNOLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYBBF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SRKENTTERVIQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 914;
                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                 THERAPY
                                                                                                                                                                                                                              Sequence 312, Application US/09338933

Patent No. 6488931

GREERAL INFORMATION:
APPLICANT: Mitcham, Jennifer Lynn
APPLICANT: Mitcham, Jennifer Lynn
APPLICANT: Mitcham, OGNEOSITIONS AND METHODS FOR THEI
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THEI
TITLE OF INVENTION: OVARIAN CANCER
FILE REPERENCE: 210121.465C1
CURRENT APPLICATION NUMBER: US/09/338,933
CURRENT PILING DATE: 1999-06-23
NUMBER OF SEQ ID NOS: 312

SEQUENCE: FRANCEO FOR Windows Version 3.0
                                                                                                                                            674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5;
                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92.9%; Score 3663; 99.9%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 92.9
Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo sapien
                                                                                                                                                                                                               RESULT 6
US-09-338-933-312
                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-338-933-312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            254
                                            554
                                                                                               614
                     639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                 셤
                                                                                                                                                                      셤
                                      8
                                                                  원
                                                                                               ₽
                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           133
         DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 617
                                   613
                                                           677
                                                                                    673
                                                                                                GVTOLGFYVLDRDSLFINGYAPONLSIRGEYQINFHIVNWNLSNPDPTSSEVITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGBATGVDALCTHRPDFTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITIRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SRKENTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                        618 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDXAQPGTTNYQRNKR
                                                                                    NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                         THE THERAPY AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                               APPLICANT: Mitcham, Jennifer L.
APPLICANT: King, Gordon E.
APPLICANT: King, Gordon E.
APPLICANT: Algate, Paul A.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER.
FILE REFERENCE: 210121.462C2
CURRENT APPLICATION NUMBER: US/09/404,879A
CURRENT FILING DATE: 1999-09-24
NUMBER OF SEQ ID NOS: 393
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                        710
                                                                                                                                                     738 LRWITRNGTQLQNFTLDRSSVLVDGYFPNRNEPLTGNS 774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
                                                                                                                                      LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 3663; DE
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                            Sequence 312, Application US/09404879A
Patent No. 6468546
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       al Similarity 99.9
696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-404-879A-312
                                                                                                                                                                                                        RESULT 5
US-09-404-879A-312
                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          339
                                                                                        614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74
                                       554
                                                                                                                                          674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
```

ö

613

us-10-687-035-1.rai

```
614 NIEDALNOLPRNSSIKSYFSDCOVSTPRSVPNRHHTGVDSLCNPSPLARRVDRVAIYEEP 673
                                                                                                                                                                                                                                                       DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          254 VDLLCTYLQPLSGPGLPIKQVPHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            399 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 518
                                                                579 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                     WIGSTYQLVDIHVTEMESSVYQPTSSSSTQHPYLNFTITNLPYSQDKAQPGTTNYQRNKR
        519 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                          GVTQLGFYVLDRDSLFINGYAPQNLSIRGBYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14 PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:

APPLICANT: Bangur, Chaitenya S.
APPLICANT: Retter, Marc W.
APPLICANT: Fanger, Gary R.
APPLICANT: Fanger, Gary R.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: COMPOSITIONS OF OVARIAN CANCER
FILE REFERENCE: 210121.462C9
CURRENT APPLICATION NUMBER: US/10/198,053
CURRENT FILING DATE: 2002-07-17
NUMBER OF SEQ ID NOS: 624
SOFTWARE: FastSEQ for Windows Version 4.0
IENGTH: 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                  674 LRMIRNGTQLQNFTLDRSSVLVDGYSPNRNRPLTGNS 710
                                                                                                                                                                                                                                                                                                                      LEMTRIGIQUE ONFILDRS SYLVDGY FPINRIE BESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .;
?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Score 3663; DE; Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 312, Application US/10198053 Patent No. 6858710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 99.9%;
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo sapiens
US-10-198-053-312
                                        434
                                                                                                      494
                                                                                                                                                                     554
                                                                                                                                                                                                     669
                                                                                                                                                                                                                                                                   759
                                                                                                                                                                                                                                                                                                                                   819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        459
                              ઠે
                                                                g
                                                                                                                            g
                                                                                                                                                                                           셤
                                                                                           ઠે
                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                       613
                                                                      NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARVDRVAIYEEF 673
                                                                                                                                 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSREPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPPTLNFT 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLFOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGFGLDIQQLYWELSQLTH 433
WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             159 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENWWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SKKPNTTERVLOGILRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      74 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                       APPLICANT: Mitchan, Jennifer L.
APPLICANT: Mitchan, Jennifer L.
APPLICANT: Mitchan, Jennifer L.
APPLICANT: King, Gordon E.
APPLICANT: King, Gordon E.
APPLICANT: Fling, Steven P.
APPLICANT: Rede, Steven G.
APPLICANT: Reed, Steven G.
APPLICANT: Carter, Darrick
APPLICANT: Carter, Darrick
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: LONGOSIS OF OVARIAN CANCER
FILE REPERRENCE: 21012.462C5
CURRENT APPLICATION NUMBER: US/09/667,857
CURRENT APPLICATION NUMBER: 2000-09-20
NUMBER OF SEQ ID NOS: 455
SOFTWARE: PARLSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTI
                                                                                                                                                                                                   819 LAMTRNGTQLQNFTLDRSSVLVDGYFPNRNEPLTGNS 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                               LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Score 3663; DB
; Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                           Sequence 312, Application US/09667857
Patent No. 6699664
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 92.9
Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-667-857-312
                    639
                                                  554
                                                                                                                  614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     399
                                                                                                                                                                               674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     374
                                                                        윱
                                                                                                      ઠે
                                                                                                                                     8
                                                                                                                                                                     8 8
                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               අ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          કે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
```

578

518

553 698 613 758 673 818

g ò

ઠે

중 음 ద ò

```
TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VDLLCTYLQPLSGPGLPIKQVPHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGFDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      74 SRKFNITTBRVLQGLLRPLFKNTSVGPLYSGCRLTLLRPBKDGBATGVDAICTHRPDPTGP
                                                                                                                                                         554 WIGSTYQLVDIHVTEMESSVYQPISSSSTQHFYLNFTITNLFYSQDKAQPGTTNYQRNKR
                                                                                                                         614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                               Gaps
                                                                                                             DKVTTLYKGSOLHDTPRFCLVTVLTMDSVLVTVKALFSSNLDPSLVBQVFLDKTLNASFH
TPKPATTFLPPLSEATTAMGYHLKTLTLNFT1SNLQYSPDMGKGSATFNSTEGVLQHLLR
                      GYTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                      Sequence 312, Application US/09827271
; Sequence 312, Application US/09827271
; Patent No. 6962980
; GENERAL INFORMATION:
    APPLICANT: Retter, Marc W.
    APPLICANT: Respective of Marc W.
    TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER; FILE REPREPRINCE: 210121.462C6
; CURRENT APPLICATION NUMBER: US/09/827,271
; CURRENT PILING DATE: 2001-04-04
; NUMBER OF SEQ ID NOS: 461
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 312
LENGRITH: 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Indels
                                                                                                                                                                                                                                                   710
                                                                                                                                                                                                                                                                         855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5;
                                                                                                                                                                                                                                                  LEMTRNGTOLONFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 3663; DE; Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , ORGANISM: Homo sapien
US-09-827-271-312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134
                                                                                                                                                                                                                                                        674
                                                                                                                                                                                                                                                                              819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                               579
         459
                                                                           434
                                                                                                                      494
                                                                                                                                           639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                     셤
                                              요 요
                                                                                            g
                                                                                                                      ઠે
                                                                                                                                      셤
                                                                                                                                                                ઠે
                                                                                                                                                                                                             ò
                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TPKBATTELPPLSEATTAMGYHLKTLTLNFTISNLOVSPDMGKGSATFNSTEGVLOHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   278
                                                                                                                                                                                                                 818
                                                                                                              433
                                                       493
                                                                    553
                                                                                                                                              613
                                                                                                                                                            673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SRKFNTTERVLOGILIRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPG
                                                                                                                                                                                         Gaps
            GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEXITLLRDIQ
                                                                                                   DKVTTLYKGSQLHDTERFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVPLDKTLNASFH
                                                                                                                                              WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .;
0
                                                                                                                                                                                                                                                                                                           Sequence 478, Application US/10198053

Sequence 478, Application US/10198053

Sequence 478, Application US/10198053

Sequence 478, Application US/10198053

SEQUENCE 10. 6858710

APPLICANT: Benter, Marc W.

APPLICANT: Hill, Paul

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY

TITLE OF INVENTION: COMPOSITIONS OF OVARIAN CANCER

FILE REFERENCE: 210121.462C9

CURRENT APPLICATION NUMBER: US/10/198,053

CURRENT FILING DATE: 2002-07-17

NUMBER OF SEQ ID NOS: 624

SEQ ID NO 478

LENGTH: 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                        LRMTRNGTOLONFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                  1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 3663; DB 2;
Pred. No. 0;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92.9%;
llarity 99.9%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 Similarity
696; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-198-053-478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S:
Matches 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74
                                                                                                                                                     554
                                                                                                                                                                                                                      759
                                                                                                                                                                                                                                            674
                                                               434
                                                                                    579
                                                                                                          494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                 8 8
                                                                                                                                                                                                                                            8 8
                                                                                                                                                                       g
```

253 398

g

ò g 8

용 ઠે g ठ 원

ò a ò 셤

```
3056 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 3115
                                                                                                                                                                                                                                                                                                                                    3116 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 3175
                                                                                                                                                                                                                                                                                                                                                                                                                               3176 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALPSSNLDPSLVEQVFLDKTLNASFH 3235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9236 WLGSTYQLVDIHVTEMESSVYQPTSSSTQHFYXNFTITNLPYSQDKAQPGTTNYQRNKR 3295
                                                                                                                                                             2996 TPKPATTFLPPLSEATTAMGYHLKTLTLNPTISNLQYSPDMGKGSATFNSTEGVLQHLLR 3055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8296 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 3355
                                                                  2936 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGXDEPPT 2995
                                                                                                                                                                                                              433
                      VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNBPGPDEPPT 313
                                                                                                                 373
                                                                                                                                                                                                                                                                                                         493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                                                                                                                                                                                                                                                    DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGABTR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              73
                                                                                                                 314 TPKPATTFLPPLSEATTAMGYHLKTLTLNPTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       393 PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       453 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGSRLTLLRPEKDGRATGVDAICTHRPDFTGP
                                                                                                                                                                                                                 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                         434 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74 SRKFNTTERVLØGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     513 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGPTHRSSVPTTSTGVVSERPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 458, Application US/10198053
; Sequence 458, Application US/10198053
; Patent No. 6858710
; Gardran No. 6858710
; APPLICANT: Bangur, Chaitanya S.
; APPLICANT: Retter, Marc W.
; APPLICANT: Fanger, Gary R.
; APPLICANT: Hill, Paul
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: COMPOSITIONS AND DIAGNOSIS OF OVARIAN CANCER
; FILE REFERENCE: 210121.466.209
; CURRENT APPLICATION NUMBER: 2002-07-17
; NUMBER OF SEQ ID NOS: 624
; SEQ ID NO 458
; SEQ ID NO 458
; LENGTH 1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92.3%; Score 3642; DB 2; Length 1148; 99.6%; Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3356 LRMTRNGTQLQNFTLDRSSVLVDGYXPNRNEPLTGNS 3392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 99.6
Matches 694; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-198-053-458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-198-053-458
                                                                                                                                                                                                              374
                                                                                                                                                                                                                                                                                                                                                                                                    494
                        254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                        ď
                                                                                                                                                      셤
                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                 ઠે
                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2876 INNLRYMADMGQPGSLKFNITDNVWKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 2935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG 2755
                                                                                                                                                                       GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 638
                                                                                                                                                                                                                                                                                   698
                                                                                                                                                                                                                                                                                                                               613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        253
                                                                                                                                            493
                                                                                                                                                                                                                                    553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         818
TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    73
                                                                                                                                                                                                                                                          PLPQKSSMGPFYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SRKFWITERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGRATGVDAICTHRPDPTGP
                                                                                                                                       GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                    DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                             WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDXAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                          #IGSTYQLVDIHVTEMESSVYQPTSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                          NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INNLRYMADMGOPGSLKFNITDNVMKHLLSPLFORSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTTTNLRYBENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; NAME/KEY: VARIANT
; LOCATION: 177, 335, 523, 618, 663, 875, 961, 1001, 1441, 1555, 1560,
; LOCATION: 1563, 1574, 1585, 2065, 2070, 2683, 2990, 3269, 3381, 3401
; OTHER INFORMATION: Xaa = Any Amino Acid
US-10-198-053-595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 3451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       METHODS FOR THE THERAPY OVARIAN CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 92.5%; Score 3651; DB 2; Best Local Similarity 99.6%; Pred. No. 0; Matches 694; Conservative 0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Retter, Marc W.
APPLICANT: Retter, Marc W.
APPLICANT: Retter, Marc W.
APPLICANT: Fanger, Gary R.
APPLICANT: Fanger, Gary R.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR:
TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CA:
TITLE OF INVENTION: DATE: 2002-07-17
NUMBER OF SEQ ID NOS: 624
SOUTHWARE PASISEQ FOR WINDOWS Version 4.0
SEQ ID NO 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 595, Application US/10198053; Patent No. 6858710; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
US-10-198-053-595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2756
459
                                                                                        519
                                                                                                                                       434
                                                                                                                                                                                     579
                                                                                                                                                                                                                                    494
                                                                                                                                                                                                                                                                                                                             554
                                                                                                                                                                                                                                                                                                                                                                           669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134
                                            374
                                                                                                                                                                                                                                                                              639
                                                                                                                                                                                                                                                                                                                                                                                                                          614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH:
```

g 8 ద ò g

ò

용

433 812 493

```
GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLDREOLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                933 MLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYPNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENNWPG
                                                                             GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLIRDIQ
                                                                                                                                                                                                                                                                                              873 DKVTILYKGSQLHDTFRFCLVINLIMDSVLVIVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                 554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                          VDLLCTYLQPLSGPGLP1KQVFHELSQQTHG1TRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                    314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                             DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                     614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                       PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
            INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THE THERAPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                      674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 458, Application US/09827271

Patent No. 6962880
GENERAL INFORMATION:
APPLICANT: Retter, Marc W.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER;
TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER;
TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER;
CURRENT APPLICATION NUMBER: US/09/827,271
CURRENT APPLICATION NUMBER: 2001-04-04
NUMBER OF SEQ ID NOS: 461
SOFTHARE: PASESEQ for Windows Version 3.0
SEQ ID NO 458
LENGTH: 1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           y Match 92.3%; Score 3642; D
Local Similarity 99.6%; Pred. No. 0;
hes 694; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
US-09-827-271-458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-827-271-458
             194
                                                                                                                                                                        374
                                                                                                                                                                                                                             434
                                                                                                                                                                                                                                                       813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  513
                                                                 254
                                                                                                                                                                                                                                                                                494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    음 장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                 g
                                                                 8
                                                                                   셤
                                                                                                                    ઠે
                                                                                                                                          원
                                                                                                                                                                        ò
                                                                                                                                                                                             g
                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                           ਨੋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                             DKVTTLYKGSQLHDTRRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SRKFNTTERVLOGILRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 133
                                                                                                                                                 433
                                                                                                                                                                                                                  GYTQLGFYVLDRBSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 872
                                                                                                                                                                                                                                                                                                            613
               632
                                                                                                             TPKPATTFLPPLSEATTAMGYHLKTLTLNPTISNLQYSPDMGKGSATFNSTEGVLQHLLR 752
                                                                                                                                                                        812
                                                                                                                                                                                                    493
                                                                                                                                                                                                                                                                                                                                                              NIEDALNQLFRNSSIKSYFSDCOVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                       VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYINGYNEPGLDEPPT
                                                                                                                                                 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                    GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 92.3%; Score 3642; DB 2; Length 1148; Best Local Similarity 99.6%; Pred. No. 0; Matches 694; Conservative 0; Mismatches 3; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 479, Application US/10198053

Patent No. 6858710

GENERAL INFORMATION:
APPLICANT: Bangur, Chaitanya S.
APPLICANT: Fanger, Gary W.
APPLICANT: Hill, Paul
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THEF
TITLE OF INVENTION: AND DIAGNOSIS OF COVARIAN CANCER
FILE REFERENCE: 210121.462C9
CURRENT FILING DATE: 2002-07-17

CURRENT FILING DATE: 2002-07-17

NUMBER OF SEQ ID NOS: 624

SOFTWARE: FastERQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                               LEMTRNGTCLONFTLDRSSYLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Homo sapiens
US-10-198-053-479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-198-053-479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 453
                                                                                                                                                                                                                                                                                                                                      933
                                                                                                                                                                                                                                                                                                                                                                614
                                                                                                                                                                                                                                                                                                                                                                                                                  674
                                                                                                                                                                                                                                                                                                                                                                                                                                             1053
                                                                   633
                                                                                              314
                                                                                                                       693
                                                                                                                                                 374
                                                                                                                                                                           753
                                                                                                                                                                                                                              813
                                                                                                                                                                                                                                                          494
                                                                                                                                                                                                                                                                                  873
                                                                                                                                                                                                                                                                                                            554
                                                                                                                                                                                                                                                                                                                                                                                           993
                                         254
                                                                                                                                                                                                     434
                                                                                                                                                                                                                                               8 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                      유
상
유
                                                                                                                                                                                                                                                                                                                                                               8 8
                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                        ઠે
                                                              ద
                                                                                            ઠે
                                                                                                                d
                                                                                                                                      Š
```

932 613 992 673

553

452 133 512 193 572

Q

Š 셤 ò g g ò 요

ઠે

g

8

g

8

ሯ

ઠે

g

ò

```
941 WLGSTYQLVDIHVTEMESSVYQPTSSSTQHFYPNFTITNLPYSQDKAQPGTTNYQRNKR 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                520
                                                                                            581 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLPQRSSLGARYTGCRVIALRSVKNGAETR 640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       133
521 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSERPFTLNFT 580
                                                                                                                                                      313
                                                                                                                                                                                                                                                                                                                              433
                                                                                                                                                                                                                                                                                                                                                     761 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    494 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                                              700
                                                                                                                                                                                                                                                                  701 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 760
                                                                                                                                                                                                                                                                                                                                                                                                                                        194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGABTR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  73
                                                                                                                                                    254 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                          554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             401 PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                              PLFOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     74 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1061 LEMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 459, Application US/09827271
| Batent No. 6562980
| GENERAL INFORMATION:
| APPLICANT: Reter, Marc W. APPLICANT: Reter, Marc W. TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER; TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER; TITLE REPERENCE: 210121.462C6
| CURRENT APPLICATION NUMBER: US/09/827,271
| CURRENT PILING DATE: 2001-04-04
| NUMBER OF SEQ ID NOS: 461
| SOFTWARE: FastSEQ for Windows Version 3.0
| SEQ ID NO 459
| LENGTH: 1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
92.3%; Score 3642; D
Best Local Similarity 99.6%; Pred. No. 0;
Matches 694; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
CORGANISM: Homo sapiens
US-09-827-271-459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 16
US-09-827-271-459
                                                                                                                                                                                                                                                                                                                            374
                                                                                                                                                                                                                                                                                                                                                                                                                 434
                                                                                                         셤
                                                                                                                                        ò
                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         음
                                                                   ò
                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           993 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    673
                                                                 632
                                                                                                                                                    692
                                                                                                                                                                                                                  TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 752
                                                                                                                                                                                                                                                                                                      PLFQKSSMGPPYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                            553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  520
                                                                                                           313
                                                                                                                                                                                            TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                               PLPQKSSMGPPYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                 872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        933 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYPNFTITNLPYSQDKAQPGTTNYQRNKR 992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       133
                                                                                                                                                                                                                                                                                                                                                                    GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73
                      VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGLDEPPT
                                                                                                                                                                                                                                                                                                                                                                                               GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIEDALNOLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FTHRSSVSTTSTPGTPTVYLGASKTPASI FGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     74 SRKFNTTBRVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              461 SRKFNTTERVLQGLLRPLFKNTSVQPLYSGSRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                         VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Bangur, Chaitanya S.
APPLICANT: Retter, Marc W.
APPLICANT: Retter, Marc W.
APPLICANT: Retter, Marc W.
APPLICANT: Retter, Gary R.
APPLICANT: Hill, Paul Banger, Gary R.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
FILE REFERENCE: 210121.462C9
CURRENT APPLICATION NUMBER: US/10/198,053
CURRENT FILING DATE: 2002-07-17
NUMBER OF SEQ ID NOS: 624
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .053 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 1089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
92.3%; Score 3642; D
Best Local Similarity 99.6%; Pred. No. 0;
Matches 694; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 459, Application US/10198053
Patent No. 6858710
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Homo sapiens
US-10-198-053-459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
US-10-198-053-459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  614
                                                                                                         254
                                                                                                                                                    633
                                                                                                                                                                                            314
                                                                                                                                                                                                                                    693
                                                                                                                                                                                                                                                                               374
                                                                                                                                                                                                                                                                                                                          753
                                                                                                                                                                                                                                                                                                                                                                                                             813
                                                                                                                                                                                                                                                                                                                                                                                                                                                       494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           401
                                                                                                                                                                                                                                                                                                                                                                    434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
```

요

ઠે

g

δ

ò

398

518 433 493

```
DKVTTLYKGSQLHDTFRFCLVTNLTMDSYLYTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                         254 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                   WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                  GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTINLRYEENMWPG
                  279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                             TPKPATTFLPPLSEATTAMGYHLKTLTINFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                INNLRYMADMGOPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                     PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 388, Application US/09667857
; Sequence 388, Application US/09667857
; Retent No. 6699664
; GENERAL INPORMATION:
    APPLICANT: Mitcham, Jennifer L.
    APPLICANT: King, Gordon E.
    APPLICANT: Algate, Paul A.
    APPLICANT: Retter, Marc W.
    APPLICANT: Retter, Marc W.
    APPLICANT: Reter, Marc W.
    APPLICANT: Red, Steven G.
    APPLICANT: Red, Steven G.
    APPLICANT: OF INTENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER; TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER; TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER; CURRENT APPLICATION NUMBER: US/09/667,857
; CURRENT APPLICATION NUMBER: US/09/667,857
; CURRENT PAPLICATION NUMBER: US/09/667,857
; NUMBER OF SEQ ID NOS: 455
; SOFTWARE: FREESEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
80.8%; Score 3189; DB 2; Length 772;
Best Local Similarity 100.0%; Pred. No. 1.8e-282;
Matches 605; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
CRGANISM: Homo sapiens
US-09-667-857-388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIEDA 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIEDA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 388
LENGTH: 772
                                                                                               339
                                                                 194
                                                                                                                                                                                           314
                                                                                                                                                                                                                         459
                                                                                                                                                                                                                                                      374
                                                                                                                                                                                                                                                                                      519
                                                                                                                                                                                                                                                                                                                     434
                                                                                                                                                                                                                                                                                                                                                    579
                                                                                                                                                                                                                                                                                                                                                                                  494
                                                                                                                                                                                                                                                                                                                                                                                                                   639
                                                                                                                                                                                                                                                                                                                                                                                                                                                554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            759
    134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         용
                                                                 8
                                                                                            a
                                                                                                                              δ
                                                                                                                                                     ద
                                                                                                                                                                                         ò
                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1001 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSFLARRVDRVAIYEEF 1060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SRKFNTTERVLOGILRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 133
                                                                                                                                                                                                                                                                                                                                                                                       881 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 940
                                                                                                                                                                            TPKPATTFLPPLSEATTAMGYHLKTLTLNPTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                             433
                                                                                                                                                                                                                                                          493
                                                                                                                                                                                                                                                                                                                        WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                                                                                                                                                                                                                     DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             L59 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNBPGLDBPPT
                                                                                                                 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                           PLFOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                         GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 389 Application US/09404879A
Sequence 389 Application US/09404879A
Sequence 389 Application US/09404879A
SERVERAL INFORMATION:
APPLICANT: Mitcham, Jennifer L.
APPLICANT: King, Gordon E.
APPLICANT: Algate, Paul A.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER
FILE REFERENCE: 210121.462C2
CURRENT APPLICATION NUMBER: US/09/404,879A
CURRENT PILING DATE: 1999-09-24
NUMBER OF SEQ ID NOS: 393
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 388
LENGTH: 772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80.8%; Score 3189; DB 2; L
100.0%; Pred. No. 1.8e-282;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.
Matches 605; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo sapiens
US-09-404-879A-388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 17
US-09-404-879A-388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219
                                                                                                                                                                                                                                                                                                                                         821
                                                                                                                                                                                                                                                                                                                                                                                                                                     554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                674
                                                                                   581
                                                                                                                   254
                                                                                                                                                641
                                                                                                                                                                              314
                                                                                                                                                                                                             701
                                                                                                                                                                                                                                           374
                                                                                                                                                                                                                                                                                                         434
                                                                                                                                                                                                                                                                                                                                                                        494
                     521
                                                    194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                     g
                                                                                                                                                                                                                                           8 8
                                                                                                                                                                                                                                                                                            ኔ 8 ኔ
                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 8
                                                                           ద
                                                                                                              8 8 8
                                                   ò
```

133

218

398 313 458 613

```
219 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 278
                       GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSERPFTLNFT 193
                                                                                                                                                                                                                                DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALPSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                            699 WLGSTYQLVDIHVTEMESSVYQPISSSSTQHPYLNPTITNLPYGQDKAQPGTTNYQRNKR 758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGPTHRSSVPTTSTGVVSERPPTLNFT 338
                                                                                                                                                                                                                                                                                                                                            434 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSBYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74 SRKFNITERVLQGLLRPLFKNISVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 133
                                                                                   194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBPFTLNFT
                                                                                                                                                  VDLLCTYLQPLSGPGLPIKQVPHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                        339 INNLRYWADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                   399 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                             PLFQKSSMGPFYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14 FTHRSSVSTISTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENWWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 388, Application US/09827271

Patent No. 6962980

GENERAL INPORMATION:
APPLICANT: Retter, Marc W.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER
FILE REFERENCE: 210121.462C6
CURRENT APPLICATION UNDER: US/09/827,271
CURRENT PILING DATE: 2001-04-04
NUMBER OF SEQ ID NOS: 461
SOFTWARE: FREEERQ for Windows Version 3.0
SEQ ID NO 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 80.8%; Score 3189; DB 2; L
Best Local Similarity 100.0%; Pred. No. 1.8e-282;
Matches 605; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-827-271-388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       614 NIEDA 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              759 NIEDA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 20
US-09-827-271-388
                                                                                                                                                                                                                                                                                                                                                                                                          494
                       134
                                                                                                                                                  254
                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                               374
                                                                                                                                                                                                                                                                                                             519
                                                                                                                                                                                                                                                                                                                                                                          579
                                                                                                                                                                                                                                                                                                                                                                                                                                          639
                                           g
                                                                                                          g
                                                                                                                                                                        g
                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                      셤
                                                                                   Š
                                                                                                                                        ઠ
                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ठे
GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSREPFTLNFT 193
                                                                  313
                                                                                                                                                                                                                458
                                                                                                                                                                                                                                                                                                                             GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLIRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                         613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                            TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                          PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLILLFTLNFTITNLRYEENMWPG 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SRKFNTTERVLQGLLRPLFKVTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74 SRKFNTTERVLOGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDFTGF 133
                                                                                                                                                                                               VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                             TPKPATTFLPPLSEATTAMGXHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                             VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDXDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                      DKVTTLYKGSQLHDTPRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 388, Application US/10198053

Sequence 388, Application US/10198053

Setuence No. 6858710

GENERAL INFORMATION:
APPLICANT: Bengur, Chaitanya S.
APPLICANT: Retter, Marc W.
APPLICANT: Fanger, Gary R.
APPLICANT: Hill, Paul
ITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
ITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
FILE REPERENCE: 210121.462C9
CURRENT APPLICATION NUMBER: US/10/198,053

CURRENT FILING DATE: 2002-07-17

NUMBER OF SEQ ID NOS: 624

SOPTWARE: PastERQ for Windows Version 4.0

SEQ ID NO 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80.8%; Score 3189; DB 2; I
100.0%; Pred. No. 1.8e-282;
ilve 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 100.
Matches 605, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIEDA 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIEDA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 19
US-10-198-053-388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-198-053-388
                                                                                                                                             339
                                                                               279
                                                                                                                                                                                                           399
                                                                                                                                                                                                                                                                                                                                       519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   219
                   219
                                                                                                                                                                             254
                                                                                                                                                                                                                                            314
                                                                                                                                                                                                                                                                            459
                                                                                                                                                                                                                                                                                                          374
                                                                                                                                                                                                                                                                                                                                                                         434
                                                                                                                                                                                                                                                                                                                                                                                                       579
                                                                                                                                                                                                                                                                                                                                                                                                                                      494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 759
                                                                     g
                                                                                                  8 8 8
                                                                                                                                                                                                 g
                                                ઠે
                                                                                                                                                                                                                                8 8 8
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

us-10-687-035-1.rai

```
GUTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWALSNPDPTSSEYITLLRDIQ 493
                                  614 NIEDA 618
                                                    NIEDA 763
                                579
                                                     759
                            434
                 g
       6 B 6
```

Search completed: March 20, 2006, 07:31:33 Job time : 43.8343 secs

	Biocceleration Ltd.
version	- 2006
GenCore version 5.1.7	(c) 1993
	Copyright

h, using sw model
8
using
search,
orotein
1
OM protein
₩ O

March 20, 2006, 07:29:34; Search time 27.2939 Seconds (without alignments) 2636.859 Million cell updates/sec Run on:

US-10-687-035-1 3945 Title: Perfect score:

1 AAQPARRARRIKI.FIHRSSV.....QKLISEEDINMHIGHHHHHH 748 Sequence:

283416 segs, 96216763 residues Searched:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

Total number of hits satisfying chosen parameters:

283416

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Bummaries Post-processing: Minimum Match 0% Maximum Match 100% Listing first 100 s

PIR 80:*
1: pir1:*
2: pir2:*
3: pir3:* 4 Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	cell surface glyco	probable membrane	fibronectin precur	episialin - mouse	nuclear pore compl	large tegument pro	hypothetical prote		hypothetical prote	DNA-binding protei	cellulose-binding	probable membrane	cell differentiati	carcinoembryonic a	Cf-4A protein - to	outer cell wall pr	hypothetical prote	genome polyprotein	proline-rich pepti	hypothetical prote	hypothetical prote		hypothetical prote	membrane protein S	tyrocidine synthet	probable regulator	probable cell surf	hypothetical prote	fibronectin precur
SUMMARIES		H69068	863399	S14428	152257	S42718	T42977	F82884	T41144	T34235	A38926	A44140	F69009	A54280	A35364	T07015	B25039	T17504	JQ1899	A41819	S38156	T11678	AH1115	AH2515	855593	T31075	S45889	AE1717	T34369	FNHU
	DB	~	N	~	7	~	~	~	N	N	•	~			~	~	7	7	~	7	~	7	7		~	~	~	~	~	-
	a)	1408	1117	2477	631	1475	2471	5005	1131	532	1377	1848	1474	888	709	855	1004	1369	3344	5762	838	948	1348	4936	643	3587	919	1622	1777	2386
	Query	3.7	3.4	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.9	5.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.8
	0	144.5	135.5	123.5	122	121.5	121.5	121.5	121	118	117.5	116	115.5	115	114.5	113.5	113.5	113.5	113.5	113.5	112.5	112.5	112.5	112.5	112	112	111.5	111.5	111	111
		-	7	m	4	2	9	7	8	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

ALIGNMENTS	Qy 606 TNYQRNKRNIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHT 649
RESULT 1 H69068 Get and the state of the sta	OY 650 GVDSLCNFSPLARRVDRVALYEBFLRMTRNGTQLONFTLDRSSVLVDG 697
J. Bacteriol. 179, 7135-7155, 1997 A,Fille: Complete genome sequence of Methanobacterium thermoautotrophicum Delta H: funct A,Reference number: A69000; MUID:98037514; PMID:9371463 A,Accession: H69068 A,Status: preliminary; nucleic acid sequence not shown; translation not shown A,Molecule type: DNA	RESULT 2 S63399 probable membrane protein YNR067c - yeast (Saccharomyces cerevisiae) N;Alternate names: hypothetical protein N3547 C;Species: Saccharomyces cerevisiae
A;Residues: 1-1408 cMTH> A;Residues: 1-1408 cMTH> A;Cross-references: UNIPROT:027557; UNIPARC:UP10000066761; GB:AE000911; GB:AE000666; NID A;Experimental source: strain Delta H C;Genetics: A;Genetics: MTH1513 A;Genet codon: TTG	C;Date: 2.7-Apr.1996 #Requence_revision op-may.1996 #LeAL_Chause op-out.2004 C;Accession: 863399 R;Duestexhoeft, A.; Floeth, M.; Fritz, C.; Heuss-Neitzel, D.; Hilbert, H.; Moestl, D. submitted to the Protein Sequence Database, April 1996 A;Reference number: S62944 A;Accession: S63399
Query Match 3.7%; Score 144.5; DB 2; Length 1408; Best Local Similarity 20.1%; Pred. No. 0.19; Matches 157; Conservative 99; Mismatches 258; Indels 269; Gaps 40;	A; Molecule type: DNA A; Residues: 1-1117 < DUE> A; Cross-references: UNIPROT: P53753; UNIPARC: UPI000013BACB; EMBL: Z71682; NID: g1302597; PII A; Experimental source: strain S288C
Qy 58 NFTITNLRYEENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKD 114	C;GenetICB: A;Gene: MIDS:YNR067c A;Cross-references: SGD:S0005350 A;Map position: 14R
Qy 115 GRATGVDAICTHRPDPTGPGLDREQLYLEL-SQLTHSITELGPYTLDRDSLYVNGFTHRS 173	C;Keywords: transmembrane protein F;6-22/Domain: transmembrane #status predicted <tmm> Onerw Watch</tmm>
174 SVPITSTGVVSEEPFTLNFTINNLRYMADMGQ 20	, 255; Indels 233; Gaps.
Db 516 AGKWVEVGSLETEPFEFEYTLRNSRAYSVGVNNFPPATVRVFLGPLIIPENLRVTPSGGG 575 Qy 206 PGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETRV 254	Qy 4 PARRARRIKLFTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHL 51 .
Db 576 B-PLKVNVTADLVNYGDLPDSYTAELYIDGVLLDSRNVTVNASSRTTVSFNRTLAAG 631 Qy 255DLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDK 295	Qy 52 LILFTLNFTITNLRYEENMWPGSRKFNTTERVLQGLLRPL 91
632	Qy 92 FKNTSVGPLYSGCRLTLLRPEKDGBATGVDALCTHRPDPTGPGLDRBQLYLELS-QLTHS 150 1:: : :
690 -TIYVNGVPDHTKVLNIPGESTVPFSTSILLPDRGLYTISLNNNVSGTVRVLSEANF	151
QY 344 TISNLQYSPDMGKGSATFNSTEGVLQHLLRPLRQKSSMGPFYLGCQLISLRFELGAATG 403 : :	
Qy 404 VDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLSIRGE 463	Db 415 PDRSPNPMSLADGVSNDGP-IQ 435 Qy 271 IKQVFHBLSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPP 312
Qy 464 YQINFHIVNWNLSNPDPTSSEYITLIRDIQDKVTTLYKGSQLHDTFRFCL-VTN 516 ::	Db 436 TNKFYTNLIVGSQESPAFVYPYSLWKYTSSSYGFAVQHTTVDQYSYGGYDSSGNAEYL 493 Qy 313 TTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGYL 368
OY 517 LIMDSVLVIVKALFSSNLDPSLVEQVFLDKTLNASFHWLG 556	Db 494 VNPLGIAHVVFSASNFDSSMTMQVDEWTLSSTRVVLSESN 533
Db 866 LVIGFTARLMVDGVVVQENIVSLSPGETREIAMGTLLTPGNHTVGINEFSKIVRVLR 922 Qy 557 -STYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGT 605	Qy 369QHLLRPLRQKSSMGPFYLGCQLISLRPBKDGAATGVDTTCTYHPDPVGFGLDIQQLY 425
923	Qy 426 WELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPD 479 : :: :

```
Odermatt, B.; Tamkun, J.W.; Hynes, R.O.
coc. Natl. Acad. Sci. U.S.A. 82, 6571-6575, 1985
Title: Repeating modular structure of the fibronectin gene: Relationship to protein st:
Reference number: 159049; MUID:86016741; PMID:3863113
                                                                                                                                                                                                                                                                                                                                                                                                                                       coss-references: UNIPARC:UP100000040C; GB:M11750; NID:g204164; PIDN:AAA41170.1; PID:g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93-2273/Domain: fibronectin type III repeat homology <FN3Q>
96-2335/Domain: fibronectin type I repeat homology <1F10>
41-2374/Domain: fibronectin type I repeat homology <1F11>
85-2420/Domain: fibronectin type I repeat homology <1F12>
-79,77-88,98-126,124-136,142-170,168-180,187-216,216,214-226,232-261,259-271,308-335,333-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Introns: 51/1; 94/1; 2416/3; 2454/3

Superfamily: fibronectin; fibronectin type I repeat homology; fibronectin type II repeat

Staywords: alternative splicing; cell adhesion; collagen binding; disulfide bond; duplic

1-32/Domain: signal sequence #status predicted <SIG>
33-2477/Product; fibronectin #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              103 GCRLTLLRPEXDGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRD 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     697 PITSASTPVTSNTVTGETAPPSPVV----ATSESVTEITASSFVVSWVSASDTVSGFRV 751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----ENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYS 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 163 SLY---VNGFTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVMK 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14 PTHRSSVSTTS-----TPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRY 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                752 EYELSEEGDEPQYLDLPSTATSVNIPDLLPGRKYIVNVYQISEEGKQSLILSTS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 3.1%; Score 123.5; up 2; ucuyum 2.1., Best Local Similarity 19.5%; Pred. No. 14; Matches 177; Conservative 133; Mismatches 309; Indels 287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 368,2366-2378,2385-2411,2409-2420/Disulfide bonds: #status predicted
F;2458/Disulfide bonds: interchain (to 2462) #status predicted
F;2462/Disulfide bonds: interchain (to 2458) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fibronectin type III repeat homology FN3L>
fibronectin type III repeat homology FN3M>
fibronectin type III repeat homology FN3M>
fibronectin type III repeat homology FN3O>
fibronectin type III repeat homology FN3O>
cell attachment (R-G-D) motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat homology < FN3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat }
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39/Domain: fibronectin type III repeat 29/Domain: fibronectin type III repeat 19/Domain: fibronectin type III repeat 16/Region: cell attachment (R-G-D) moti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ibronectin type III
ibronectin type III
                                                                                                                                                                                                                                                                                                     Status: translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67 B-----
                                                                                                                                                                                                                                                                                                                                                  Molecule type: DNA
Residues: 1722-1810 <RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .81-2183/Region:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .1-1893/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cross-references: UNIPARC:UPI0000177AEA, EMBL:X15906; Tamkun, J.W.; Schwarzbauer, J.E.; Hynes, R.O. roc. Natl. Acad. Sci. U.S.A. 81, 5140-5144, 1984; Title: A single rat fibronectin gene generates three different mRNAs by alternative sp.; Reference number: A22319; WUID:84298097; PMID:6089177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Residues: 1-2477 < HYN>
B; Cross-references: UNIPSOT: P04937; UNIPARC: UPI000012A7C6; EMBL: X15906; NID: G56163; PIDN B; Schwarzbauer, J.E.; Patel, R.S.; Fonda, D.; Hynes, R.O.
EMBO J. 6, 2573-2580, 1987
A; Title: Multiple sites of alternative splicing of the rat fibronectin gene transcript.
A; Reference number: S12455; MUID: 88054951; PMID: 2445560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Residues: 2552-2237 <TAM>
Cross-references: UNIPARC:UPI0000177AEB
Falkenberg, C.; Enghlid, J.J.; Thogereen, I.B.; Salvesen, G.; Akerstroem, B.
Iochem. J. 301, 745-751, 1994
Filte: Isolation and characterization of fibronectin-alpha(1)-microglobulin complex in Reference number: S46203; MUID:94330948; PMID:7519849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A,Accession: S40205
A,Status: preliminary
A,Status: preliminary
A,Reates: preliminary
A,Residues: 1183-1192; GLN',1268,'P',1270-1271,'D',1273,'CF',1276,'PY',1385-1399 <FAL>
A,Residues: 1183-1192; GLN',1268,'P',1270-1271,'D',1273,'CF',1276,'PY',1385-1399 <FAL>
A,Residues: 1183-1192; GLN',1268,'P',1270-1271,'D',1273,'CF',1276,'PY',1385-1399 <FAL>
A,Cross-references: UNIPARC:UPI0000177AEC; UNIPARC:UPI0000177AEC
A,Cross-references: GRN AREA CONTAINED (UNIPARC:UPI0000177AEC)
A,Cross-references: GRN AREA CONTAINED (UNIPARC:UPI0000177AEC)
A,Cross-references: UNIPARC:UPI0000177AEC)
A,CROSS-REFERENCES:UPI0000177AEC)
A,CROSS-REFERENCES:UPI000177AEC)
A,CROSS-REFERENCES:UPI0000177AEC)
A,CROSS-REFERENCES:UPI000177AEC)
A,CROSS-REFERENCES:UPI0000177AEC)
A,CROSS-REFERENCES:UPI0000177AEC)
A,CROSS-REFERENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Patel, R.S.; Odermatt, E.; Schwarzbauer, J.E.; Hynes, R.O.
Rabo J. 6, 2565-2572, 1987
A;Title: Organization of the fibronectin gene provides evidence for exon shuffling durin
A;Reference number: 800459; MUID:88054950; PMID:3119323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cell 35, 421-431, 1983
A/Title: Three different fibronectin mRNAs arise by alternative splicing within the codi
A/Reference number: A27252; MUID:84082067; PMID:6317187
                                                                                                                                                                      640 ETDYEVPYDQAAGMYVTNPKLQGVSDGSTATYEFSYTTQGESASGSTMIFALPHHESSFS 699
                                                                                                                                                                                                                                                                                                                                                  DIMODYYTGIQLASTTKGVMGYLTTSLQ----PSTSLNRQISWLPWSSQLGSNLLBYSK 755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | :: :|:: | :| :| :| EQLQLLAEVANSELQVSISESISGLAT--YYLGKVIDKYSYILLITVSEIIQDEASTKST- 812
    586 YRIT-LLNGVTWL-CYVIGPDDLTSTDF---SLEVSSEYEIKASASVDGLIIQLAVA-PS 639
                                                                                                                                                                                                                                                                                                                                                                                                                                       ----LVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPY-----SQDXAQPGTTN 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Residues: 1-139;2382-2477 <PAT>
A;Cross-references: UNIPARC:UPI000017095C; UNIPARC:UPI0000177AEP; EMBL:X05831
A;Note: the authors translated the codon CCT for residues 51 and 94 as Ala
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Species: Rattus norvegicus (Norway rac)
Space: 28-Oct-1994 #sequence revision 28-Oct-1994 #text change 09-Jul-2004
Accession: S14428; S12455; A22319; S46203; S00459; A27<u>75</u>52; I59049
                                                                                                                                                                                                                                                       511 FCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFHWLGSTYQ-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schwarzbauer, J.E.; Tamkun, J.W.; Lemischka, I.R.; Hynes, R.O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ubmitted to the EMBL Data Library, July 1989
Reference number: S14428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Status: nucleic acid sequence not shown Molecule type: mRNA, Residues: 609-1810, 'T', 1812-2283 <SCH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ||: | : | :|
----LENIKSAFDILLON 826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YORNKRNIEDALNOLFRN 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ibronectin precursor - rat
                                                                                     PTSSE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Accession: S14428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Accession: S12455
                                                                                     480
                                                                                                                                                                                                                                                                                                                                                  700
                                                                                                                                                                                                                                                                                                                                                                                                                                       561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               813
                                                                                                                                                                                                                                                                                                                           ద
셤
                                                                                 ઠે
                                                                                                                                                                  셤
                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

```
A;Introns: 20/1; 454/3; 472/2; 517/1; 557/3; 607/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HSTI-----
                                                                                                  Local Similarity
les 122; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --SVGVSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
                                                                                                                                                                                                               83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                      149
                                                                        Query Match
                                                                                                         Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

PS2517 **

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: UNIPARC:UPI000002A11B; GB:M84683; NID:g199842; PIDN:AAA39756.1; PID:
C;Genetics:
A;Gene: Muc1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1223 V-----VHADQSSCTFENRNPGLEYNVSVYTVKDDKESAPISDTVIPEVPQLT 1270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : :| | | : | | | : | | | APIVNRVVTPLSPPTNLHLEANPDTGVLTVSWERSTTPDITGYRITTTPINGQQGTALER 1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1004 FVNETDRTVLVTWTPPRARIAGYRLTVGLTRGGOPKQYNVGPMASKYPLRNLQPGSEYTV 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1064 TLMAVKGNQQSPKATGVFT-TLQPL---RSIPPYNTEVTETTIVITWTPAPRIGPKL-GV 1118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          593 NLPYSQDKAQPGTTNYQRNKRNI----EDALNQLFRNSSI-----KSYFSDCQVSTF 640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               695 VDGYSPNRNEPLTGNSADIQHSGGRSSLEGPR-FEQKLISEEDLNMH------TGH-- 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQLGFYVL-----DRD 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IQDKVTTLYKGSQLHDTFRFCLVTN----LTMDSVLVTVK----ALFSSNL---DPSLV 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EQVFLDKT-LNASFHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHFYLNFTIT 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        641 RSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQN-----FTLDRSSVL 694
                                                                                                                        :|:| |: | | ||:| | | ||:| | | ||:| | | ||:| | | ||:| | | ||:| | ||:| | ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| 
                                                                                                                                                                                                                                                                                                                                                          ---PTTPKPATTFLPP-----LSEATTAMG----YHLKTLTLNFTISNLQYSPDMG- 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----KGSATFNSTEGVLQHLLRPLFQKSSMGPF-------YGSATFNSTEGVLISL 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SLFINGYA-----PQNLSIRGEYQINFHIVNWNLS-NPD------PTSSEYITLLRD 491
                                                                            -- ARYTGCRVIALRSVKNGAET--RVDLLCT 259
       ---QPG-VQYNITIYAVE 883
                                                                                                                                                                                                               260 YLQPLSGPGLPI-KQVFHELSQQTHGIT---RLGPYSLDKDSLYLNGYNEPGPDEP----
          --TLSDL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-631 <RE2>
          843 -VYSPSVEGSSTELNLPETANSV--
                                                                                --HLLSPLF-ORSSLG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RHHAEH 1486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -нинин 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1163
                                                                                                                                                                                                                                                                                                                                                             312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                          å
                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ठे
          음
                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                    Š
                                                                        ठे
```

```
nuclear pore complex protein nupl53 - human
C;Species: Homo sapiens (man)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 09-Jul-2004
C;Accession: 542718; 837477
R;McMorrow, I.; Bastos, R.; Horton, H.; Burke, B.
R;McMorrow, I.; Bastos, R.; Horton, H.; Burke, B.
A;Title: Sequence analysis of a cDNA encoding a human nuclear pore complex protein, hnup
A;Reference number: 542718; MUID:94154002; PMID:8110839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Residues: 1-1475 <MCM>
A;Cross-references: UNIPROT:P49790; UNIPARC:UPI000012FC15; EMBL:Z25535; NID:g406224; PID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       394
                                                                     26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ITNLR-----YEENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPE 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---LPA 434
                                                                                                                                                                                 PGSLKENITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETRVDLLCTYLQPLS 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    195 GTSSPATTAPVDSTSSPVAHDDTSSPATSLSEDSA----SSPVAHGGTSSPATSPLRDS 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     250 TSSPVHSSASI---QNIKTTSDLASTPDHNGTSVTTTSSALGSATSPDHSGTSTTTNSSE 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         366 GVIQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPG-LDIQQL 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           347 LGSATSLVYNTSAIATTPVS-----NGTQP---SVPSQYPV-----SPTWATTSS 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YITLLRDIQDKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFL 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   545 DKTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPG 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           266 GPGLP--IKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEP----GPDEPPTTPKPAT 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----LILNFIISNLQYSPDMGKGSATFNSTE 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----STTKVTSGSAIIPDHNGSSVLPTSSV 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 425 YWELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFTSSE 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----- 414
                                                                                                                                                                                                                                                                                                                                    110 HGDTSSPATSLSKDSNSSPVVHSGT--SSAPATTAPVDS----TSSPVVHGGTSSPATSP 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164 PGD------L-L----STSSPDHSSTSSPATRAPEDSTSTAV-----LS 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7 RARRIKLFTHRSSVSTTSTP-----GTPTVYLGASKTPASIFGPSAASHLLILFTLNFT
                                                                                                                                 RPLFKNTSVGPLYSGCRLTLLRPEKDGBATGVDAICTHRPDPTGPGLDREQLYLELSQLT
                                                                                                                                                                                                                                                                     HSITELGPYTLDRD----SLYVNGFTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQ
3.1%; Score 122; DB 2; Length 631;
llarity 21.4%; Pred. No. 1.9;
Conservative 55; Mismatches 207; Indels 186; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 3.1%; Score 121.5; DB 2; Length 1475; Best Local Similarity 19.4%; Pred. No. 8.1; Matches 86; Conservative 57; Mismatches 162; Indels 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         351 QAKREKVDSQYPPVQRLMTPKPVSIATNRSVYFKPSLTPSG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   395 KTNQRIDNKCSTGYEKNMTPGQNR----EQRESGFSYPNFS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SNYYQELKRNISGLFLQIFNGDFLGISSIK 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTNYQRNKRNIEDALNQLFRN----SSIK 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----ASSSYYSTVPF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SVL--ATTPVY--SSM-PF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      320 TFLPPLSEATTAMGYHLKT
```

Db 590 BIELK-NISSM-FTSELGEDFSVICTNEBYTAILLAIENLKEKIFSRKÖELHABEIYFOS 647 389 QLISLRPEKDGAATGVDTTCTYHPDEVGFG-LDIQQLYWELSQLTHGVTQLGFYVLDRDS 447 :	562 VDIHVTEMESSYYQPTSSSTQHFYINTITNLPYSQDKAQPGTTNYQ 149	SULT 7 2884 2884 pothetic Species Species Accessio Alass, Janes Accessio Script Accessio Status: Wolecule Script Accessio Status: Wolecule Script Accessio	Query Match 3.1%; Score 121.5; DB 2; Length 5005; Best Local Similarity 19.6%; Pred. No. 58; Matches 135; Conservative 108; Mismatches 216; Indels 229; Gaps 39 Qy 136 DREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVS-EBPFTLNFT1 194 E	OY 343 PTISNLOYSPDMGKGSATFNGTEGVLQHLLRPLFQKSSMGPFYLGCQL 390
Qy 113 KDGBATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHR 172 Db 435 ANGLSSGVGGGGGGWRRENHAPVASKPLEEEEMEVPVLPKISLPITS 481 Qy 173 SSVPTTSTGVVSEEPFTLNPTINNLRYNADMGQPGSLKFNITDNVWKHLLSPLFQ 227 Db 482 SSLPTFNPSSPRITTSSPSPINSSQALTNKVQWTSPSSTGSPMPKFSSPIVKSTEANVLP 541 Qy 228 RSSLGARYTGGRVIALRSVKNGAETRVDLCCTYLQPLSGPGLPIKQVFHELSQQTHGITR 287 Db 542 PSSIGFTFSVPVAKTAELSGSSSTLEPIISSSAHHVTT 579 Qy 288 L	580 VNSTNCKKTPPEDCEGFFRPABILKEGSVLDILKSFGFASPKIDSVAAQPTATSPVVYTR 323 PPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLRPLFQKSSMG :	RESULT 6 142977 15. Eleckenstein, B. 15. Manecht, J.C.; Fleckenstein, B. 16. Manecht, J.C.; Fleckenstein, B. 17. Submitted to the EMBL Data Library, August 1998 17. Submitted to the EMBL Data Library, August 1998 17. Reference number: 22274 17. Reference	1 AAQPARARRIKU.FTHRSSVSTTSTPGTPTVVLGASKTPASIFGPSAASHLLILFTLNFT 60 ::: :: :: :: : : : : : : :	Qy 278 LSQQTHGITRLGPYSLDXDSLYLNGYNEPGPDEPPTTPKPATTFLPPLSEATTAMGYHLK 337 : : : : : : : : : : : : : : : :

932NSDDNHVLIDSQRTFGFSTPKASEDLYDLANWTKNSWHIVI 979 444 DEDELETRICKAELTRYPROGREDIASTORT	179 ST
rnative initiators 3.1%; Score 121; DB 2; Length 1131; ilarity 18.6%; Pred. No. 5.7;	R;Hallsworth, K. submitted to the EMBL Data Library, November 1995 A;Description: The sequence of C. elegans cosmid F22A3. A;Reference number: Z21492
; Conserva AQPARRARRTK : ASSSSASATA	A,Accession: 134235 A,Status: preliminary; translated from GB/EMBL/DDBJ A,Molecule type: DNA A,Residues: 1-532 <hal> A,Residues: 1-532 <hal> A,COSS-1: Teferences: UNIPROT:Q19695; UNIPARC:UPI000017B91C; EMBL:U41547; PIDN:AAA83194.1;</hal></hal>
Qy 62 TNLRYEENWWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVD 121	C;Genetics: A;Genetics: A;Introcos: 55/1; 71/1; 99/1; 148/3; 176/3; 190/1; 239/1; 303/1; 331/3; 357/1; 391/1; 511 F;446-527/Domain: ets DNA-binding domain homology <fts></fts>
Qy 122AICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTT 178 :	Query Match 3.0%; Score 118; DB 2; Length 532; Best Local Similarity 20.5%; Pred. No. 2.7; Matches 101; Conservative 59; Mismatches 171; Indels 162; Gaps 25;

ò	255 DILC-TYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNBP 306	Db 73	: : :	
qq		Qy 27	270 PIKOVPHELSOQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPTTPKPATTFLPPLSEAT 329	
È	307 GPDEPPTTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATF 361	Db 765	SSPGTDABIXIPGLISELNQRITELKMEPGTDABIXIPKCLPNTTIGGISEDP 808	,
qq	53 -PPEPFPPPPPTLIFKLSETQFHGLNQFAFPFNNLEYKYGSCKSDDSSSM 103	Qy 330	O TAMGYHLKTLTLINFTISNLQYSPDMGKGSATFNSTEGVLQHLLRPLFQKSSMGPPYLGCQ 389	
ò	362 NSTEGVLQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGAATGVDT 406	DD 809	9 LQNQTSFRNTVSNKQGTVSGSIQGQFRRDSQNSTASTYYGSMQ 851	
g	104 NGT-GSVGHRWNSLSPEPHSGTESTASTPFVKSEF-PPDDDLFGIDQ 148	390	LISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSO	
È	407 TCTYHPDPVGPGLDIQQLYWELSQLTHGVTQLGFYVLDRD-SLFINGYAPQNLSIRGE 463	Db 852	.2SRRSSQSQVSSIPTWRPNPSCNSTASFY-DPISPGCSRRSSQMSNGANCNSF 903	
qq	149 VNNVKPHPMDMPCNLPIQPIEYNRRFSKDADHSTFVKNBIEENI 192	Oy 435	VTQLGFYVLDRDSLFINGYAPQNLS	
È	464 YQINFHIVWMLSNPDPTSSEYITLIRDIQDKVTTLYKGSQLHDTF 509	Db 904	4 TSTSGLPVLNKESNKSLNACINKPNIGVQGVGIYNSSLPPPPSSHLIATN 953	
qq	193INFN-VNPEIAQDNGLDTQQIDIYRDILIRHLIQDISTTCAKLGLPNDFYLWSSEHGA 249	Qy 489	9 IRDIQDKVITLYKGSQ504	
ò	510RPCLVINLTMDSVLVIVKALPSSNLD 535	Db 954	4 LKRLIGRKDSBYHNFSSGRFSVPSYMHSLHIKNNKPVGBNBFDKAIASNARRQTDPVPNIN 1013	
qq	250 RWINEMCMQFNLQPPRNCSITGIDLLGMSQKDFEMILPAGGDTLHAQLQVWKTAFENYHP 309	QY 505	LHDTFRFCLVTNLTMDSVLV	
ò	536 PSLVEQVFLDKTLNASFHWLGST-YQLVDIHVTEMESSVYQPTSSSSTQHF 585	Db 101	1014 LDPLTNISRESTTPHSFDINVGKTNNIASLINKDNLRKDLFTVSIKADMAMTSDQHPNER 1073	
qq	310 PVTVQSSGMTAAENNMQSKTNWLASTNNQTNNMAAAENPNHPFRGNGGYPNMSMSSF 367	Ογ 542	VPLDKTLNASFHWLGSTYQLVDIHVTE-MES	
ò	586 YLNPTITNLPYSQDKAQPGTTNYQRNKRNIEDALNQLFRNSSIKSYFSDCQVSTFRSVPN 645	Db 107	1074 INLDEVERLILPDEMLQYLNLVKDDTNHLEKEHQAVPVGSNVSETIASNHYREQSNI 1130	
qq	368 PQCTVLPSPSNSDTSSNGSSQ-DMNDDDIDLHMNNSNCGFSNFFHNQG 415	Qy 584	HFYLNFTITNLPYSQDKAQPGTTNYQ	
È	646 RHHTGVDSLCNPS 658	. da		
qq	11	Qy 644	4 PNRH-HTGVDSLCNFSPLARRVDRVALYEFLRMTRNGTQLQNFTLDRSS 692	
		, Db 117	: : :	
RESULT 10 A38926	10	69	693 VLVDGYSPNRNE 704	
DNA-bi	DNA-binding protein ci (D) - fruit fly (Drosophila melanogaster) C:Species: Drosophila melanogaster			
C, Date	C;Date: 06-Feb-1995 #sequence_revision 06-Feb-1995 #text_change 09-Jul-2004 C;Accession: A38926; A35817; \$12122; \$12769			
R,Slus	rski, D. ed to GenBank, October 1990	RESULT 11		
A, Refe	or o	cellulose-bi	nding protein A precursor - Clostridium cellulovorans	
A; Acce A; Mole	Bion: A38926 ule type: mRNA	C;Species: C C;Date: 27-J	lostridium cellulovorans un-1994 #sequence_revision 27-Jun-1994 #text_change 09-Jul-2004	
A; Resi	ues: 1-1377 <slu> -references: UNIPROT:P19538; UNIPARC:UPI000016BB41; GB:X54360; NID:97732; PID:977</slu>	C; Accession: R; Shoseyov,	A44140 O.; Takagi, M.; Goldstein, M.A.; Doi, R.H.	
R,Oren. Genes 1	1	Proc. Natl.	Acad. Sci. U.S.A. 89, 3483-3487, 1992 mary sequence analysis of Clostridium cellulovorans cellulose binding p	proteir
A; Titl	: Cloning and characterization of the segment polarity gene Cubitus interruptus dence number: A35817; MUID: 90346286; PMID: 2166702	A; Reference	number: A44140; MUID:92228810; PMID:1565642 A44140	4
A; Acce	sion: A35817	A, Status: pr	eliminary	
A; Resid	A.Residues: 'MKISPITANSOKILITCL',114-1151,'K',1152-1377 <ore> A.Cross-references: UNIPARC:UDI000017BE89; GB:X54360</ore>	A;Residues: A;Cross-refe	A;Notectic Lype: Lype: Ann. A;Residues: 1-1848 «SHO» A;Cross-references: UNIPROT: P28058; UNIPARC:UP100001271C5; GB:M73817; NID:9144748; PIDN:	PIDN:
C; Gene	ics: Plybace.ni	C, Genetics:		
A; Cros	-references PlyBase: PBgn0004859	A/Gene: copA		
C; Neyw	ras: DNA binaing; zinc iinger	Query March Best Local	Similarity 17.7%; Pred. No. 28; Length 1848;	
Quer	3.0%; Score 117.5; DB 2; Length 1377; nilarity 19.6%; Pred. No. 14;	Matches	80 80 80 80 80 80 80 80 80 80 80 80 80 8	
Matc	; Conservative 83; Mismatches 224; Indels 233; Gaps		FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAAS : :	
È	166 VNGFTHRSSVPTTSTGVVSEBPFTLNFTINNLRYWADMGQPGSL 209	Db 154	4 YTQTNDYSFDASSSTPVVNPKVTGYIGGAKVLGTAPGPDVPSSIINPTSATFDKNVTKQA 213	
d d	675 VNGVRASDSLLTYSPDDLAENLINLDDGWNCDDDVVADLPIVLRAMVNIGNGNAS 729	Oy s	50 HLLILFTLNFTITNLRYBENMWPGSRKFNTTBRVLQGLLRPLFKNTSVGPLY 101	
ò	210 KFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGABTRVDLLCTYLQPLSGPGL 269	Db 21	214 DVKTIMILINGNIFKTITDANGTALMASTDYSVSGNDVTISKAYLAKQSVGTTT 266	

```
용
                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                         a
                                                                                                                                                           요
                                                                                                                                                                                          a
                                                                                                                                                                                                              ò
                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                             8
         ઠે
                          ď
                                              ઠે
                                                          셤
                                                                             8
                                                                                            원
                                                                                                         ⋧
                                                                                                                                             Š
                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                         ------LNGYTFNGITGLTTSDYSISGNVVKISQAYLAKQPVGDL 640
                                                                                                                                                                                                                                                                         HDTFRFCL--VTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFHWLGSTYQLVD 563
                                                              -----VNGFTHR-SSVPTTSTGVV----SEEPFTLNFTINNLRYMADMGQPGSLKFN 212
                                                                                                                               ----GP----GLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEP 311
                                                                                                                                                               PITPKPATIFLPPLSEATIAMGYHLKTLTLNFTISNLOYSPDMGKGSATFNSTEGVLOHL 371
                                                                                                                                                                              --------AAGSVTINIGDPILEPT 580
                                                                                                                                                                                              LRPL---FOKSSMGPFYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLDIQQLYWEL 428
              LNFNFSAGNPOKLVITVVDTPVEAVTATIGKVQVNAĠĖTVAVPVNLTKVP---AAGLATI 323
--- DGEATGVDAICTHRPDPTGPGLDRE
                                                                                               ITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKN----GAETRVDLLCTYLOPLS---
                                                                                                                                          -LGPYTLDRDSLY--
                                                                              384 ITFKAKAITGTTAKVTSVKLAGTPVVGDAOLOEKPCAVN------
                                                                                                                                                                                                          SQLTHGVTQLGFYVLDRDSLFINGYAPQNLS--IRGEYQINFHIV-
                                                                                                                                                                                                                                                              --NWNLSNPDPT-SSBYITLLRDIQDKVT----TLYKG-
                                                                                                                                                                                                                                                                                                                                         FKAKSVISTVITPVKVSGIPVF-ADGILAELSY 792
                                                                                                                                                                                                                                                                                                                               564 IHVTEMESSVYOPTSSSSTQHFYLNFTITNLPY 596
                                                                                                                                                                               STVTTPVTVSGTPVFADGTLAEVQSKT-
SGCRLTLLRPEK-----
                                                                                                                430
                                                                                                                                                                312
                                                                                                                                                                                                                                429
                                                                                                                                                                                                                                                                                                                                                191
               267
                                                                                                213
                                                                                                                                                486
                                                                                                                                                                                                372
                                                                                                                                                                                                                581
                                                                                                                                                                                                                                                                472
                                                                                                                                                                                                                                                                                                               701
                                                                166
                                                                                                                                266
                                                                                                                                                                                                                                                602
                                                                                           8 6 8 6 8 6 8 6 8 6 8 6 8 6
                              8 6 8 6
                                                                                                                                                                                                                                                                                                                              8 8
            셤
8
```

```
probable membrane protein MTH1074 - Methanobacterium thermoautotrophicum (strain Delta H C; Species: Methanobacterium thermoautotrophicum C; Species: Methanobacterium thermoautotrophicum C; Species: Methanobacterium thermoautotrophicum C; Species: Methanobacterium thermoautotrophicum C; Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 09-Jul-2004 C; Accession: F69009 M: Pasadafora, R: Vicaire, R: Mang, Y: Wierzbowski, J: Dubois, J: Aldredge, T:; A; Mit, S:, Church, G.M.; Daniels, C.J.; Mao, J:, Rice, P:; Noelling, J:; Reeve, J.N. J: Bacteriol. 179, 7135-7155, 1997 A; Title: Complete ganome sequence of Methanobacterium thermoautotrophicum Delta H: funct A; Restiues: preliminary; nucleic acid sequence not shown; translation not shown A; Restiues: preliminary; nucleic acid sequence not shown; translation not shown A; Restiues: 1-1474 avmth A; Restiues: 1-1474 avmth A; Restiues: 1-1474 avmth A; Restiues: UNIPROT:027146; UNIPARC:UPI0000666BF; GB:AE000878; GB:AE000666; NIE A; Genetics: A; Genetics
```

ઠે 셤

38; 83 Gaps 215; Similarity 20.5%; Score 115.5; DB 2; Length 3 Similarity 20.5%; Pred. No. 21; SB 2; Indels 306; Indels Matches 158;

Query Match Best Local

8

Length 1474;

735 878 622 930 682 977 188 230 695 399 503 853 504 OLHDTFRFCL-VINLIMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFHWLGSTYQLV 562 539 GSYYMGTWNVGTLNYLBIATLTIIARVNATGSLTNFANIT-----SPNFDPNPDNNN 590 THGITRLGPYSLDKDSLYLNGYNEPGPDEPPTTPKPATTFLPPLSEATTAMGYHLKTLTL 341 400 AATGVDTTCTYHPDPVGPGLDI--QQLYWELSQLTHGVTQLGFY----VLDRDSLFINGY 453 LGARYTGCRVIALRSVKNGABTRVD-----LLCTYLQPLSGPGLPIKQVFHE-LSQQ 281 931 INTVSVISTEXDPDLT-----NHHAAG---LLN----AEAVADIAVQKTVLLTFINNGQ -----SVNNPEPY-VGENIQYTITVSNRG--PDNAAGVVVEDVLPAGLIPISATPSK -----TINE-TINERYMADMGQPGSLK--FNITDNVMKHLLSPLF----QRSS DIAEVVĞIPVADLAIVKQVSDPRPDYGSVVTFTVAVTNIGPSNATGVTVTDILSPGLVYL 342 NFTISNLOYSPDMGKGSA--TFNSTEGVLOHLLRPLFQKSSMGPFYLGCQLISLRPEKDG --SVTGNERDPDRINNDAVSTLNAVSADLS-----IQKTVD------RPVINN ATLILVVRATOAGFOTN--IVNVSSELPDPLPGDNVDAVTVDVRPSADVKITKTVSNTAP APQNLSIRGE---YQINFHIVNWNLSNPDPTSSEYITLL-----RDIQDKVTTLYKGS -----RT-----DIHVTEMESSVYOPTSSSSTOHFYLNFTITNLPYSODKAOPGTTNYORNKRNIEDALNOL FRNSSIKSYFSDCOVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTO LOGILRPLFKNTSVGPLYSGCRLT--LLRPEKDGEATGVDAICTHRPDPTGPGLDREQLY LONFILDRSSVLVDGYSPNRNEPLIGNSAD-----IQHSGGRSSLEG 724 LELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPF-854 DFGDTVVFYITVTNLGPDTATVV------84 142 231 591 651 969 454 964 683 393 448 490 189 282

NiAlternate names: loose aggregate C C;Species: Dictyostclium discoideum C;Date: 09-59p-1994 #sequence_revision 09-Sep-1994 #text_change 09-Jul-2004 C;Accession: A54280 R;Dynes, J.L.; Clark, A.M.; Shaulsky, G.; Kuspa, A.; Loomis, W.F.; Firtel, R.A. Genes Dev. 8, 948-958, 1994 A;Title: LagC is required for cell-cell interactions that are essential for cell-type A;Reference number: A54280; MUID:95011593; PMID:7926779 cell differentiation protein LagC precursor - slime mold (Dictyostelium discoideum)

d:

A;Gross-references: UNIRROT:P42523; UNIPARC:UPI000012E1FF; GB:U09478; NID:G495172; PIDN: A;Note: authors translated the codon TCA for residue 34 as Leu A;Status: preliminary; nucleic acid sequence not shown A;Molecule type: mRNA C; Genetics:

A;Gene: lagC C;Superfamily: Dictyostellum discoideum cell differentiation protein LagC C;Keywords: transmembrane protein

A; Molecule type: mRNA A; Residues: 1-709 < REB> A; Crossites: 1-709 < REB> B; 1-137/Domain: carcinoembryonic antigen precursor amino-terminal homology < CEA1> B; 168-217/Domain: immunoglobulin homology < IMM1> B; 168-217/Domain: carcinoembryonic antigen precursor amino-terminal homology < CEA2> B; 480-612/Domain: carcinoembryonic antigen precursor amino-terminal homology < CEA2> B; 480-612/Domain: carcinoembryonic antigen precursor amino-terminal homology < CEA3> B; 633-690/Domain: immunoglobulin homology < IMM2>

preliminary

30

201;

Length 709; Indels

Match 2.9%; Score 114.5; DB 2; Local Similarity 20.0%; Pred. No. 7.6; es 136; Conservative 80; Mismatches 263;

Query Match Best Local S: Matches 136

GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193

6 134

셤

ઠે

셤

ઠે

셤

a

ò

셤

ठ

셤

ò 셤 ઠે a ò 셤 δ 셤 ઠે

ઠે

ઠે

121 ---LRTISNHGE-----IVSNTSLH-LHVYFSTLTGGRAATSAQ-LSIESVPTSISKG 168

254 VDLLCTYLQPLSGPGLP--IKQVFH------BLSQQTHGITRL--GPYSLDKDSLY 169 BSAL-----LLAHNLPENLRAIFWYKGAIVFKOLEVARYVIGTNSSVPGPAHSGRETMY

194 INNIRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR

223 SNGSLLLQNVTRNDAGFYTLKTLST-----DLKTEIAYVQLQVDTCFMSYAGPPTSAQL 276

LNG----YNEPGPDEPPTTPKPATTFLPPLSEATTAMGY-HLKTLTLNFTISNLQYSPDM 354

277 TVESAPTSVAEGASVLLLVHNLPENLRAIFWYKGVILFKDLEVARYVIGTNSSVLGPAHS 336

355 GKGSATFNSTEG----VLQHLLRP------LFQKSSMGPFYLGCQLISLRPEKD

GAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQ--LGFYVLDRDSLFINGYAPQ 456

337 GRET--------MYSNGSLLLQNVTRNDAGFYTLRTLSTDLKAKV--457 NLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQDKVTT-LYKGSQLHDTFRFCLVT

398

406 572 |:: : | : | | :: | | : | | 447 VFRGPAHSGRETVYTNGSL----LLQDATEKDTGLY------TLQIIYRNFKIETAH 493

VYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKRNIEDALNQLFRNSSIKSYF

573 407

633 SDCQVST-----FRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGT 681

494 VQVSVHTCVHPSTTGQLVIESVPPNVVEGGDVL-------LLVHNMPE

----ESVLLQVR-----NLPEDL------RMFIWFKSVYTSQIFKIAEYSRAINY 446

516 NLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFHWLGSTYQLVDIHVTEMESS---

374 ----DPVPRHAAKG

QLQNFTLDRSSVLVDGYSPNRNEPLTGNSADI--QHSGGRSSLEGPRFEQKLISEEDLNM 739

682

299 222

```
47;
                                                                                     821
                                                                                                                                                                                                                   SPDGI--DQP---NFIISVNHKQIQVNNYNRV----DPGPMSVNITVDEVSIEKNYIHCF 291
                                                                                                                                                                                                                                                                                                                                ---- ELSQQTHGI---- 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         522
                                                                                                                                                                                                                                                                                            PAIITSISSVSNHLDGIVTIKGEKLSSTLNYYLTPSI---TIGDKY-----VIIKSTTTE 343
                                                                                                                                                                                                                                                                                                                                                                                            TRIGBYSLDKDSLYLNG-----YNEPGPDEPPTTPKPATTFLPPLSEAT----TAM 332
                                                                                                                                                                                                                                                                                                                                                                                                                          ----KSVTFELPHLRCRSFNINFTRS 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GYHLKTLTLINFTIS-NLQYSPDMGKGSATFNSTEGVLQHLLRPLFQKSSMGPFYLGCQLI 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              454 GITAKTLSISASLSVNVINRPTV------SNGIL------NIEIYYMDCTIS 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SLRPE------KDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQ 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----NPDPTSSEY 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           709 RSGPSTTLTYIKPMISEIPTIENKIEKGILAIIRG-YSFTDILNASLTVSSETVPLSCNL 767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              :::::| | : :| :::| ---IQELEDHQLTIKILDSYENGFINITVDGNYMDSLFYLTLPPVIYRITNKDNKTLACG
                                                                 GPGLD
                                                                                                                                    -----RDSLYVNG---FTHRSSVPT
                                                                                                                                                                                                                                                                                                                                                          ----ANBLGGKNLPVNVNFGGCDSTSPNGVSFTYNIPTLSRGSYSNGIVTLIG
                                                                                                                                                                                                TSTGVVSEEPFTLNFTI-----NNLRYMADMGOPGSLKFNIT-------
                                                                                                                                                                                                                                                                -----DNVMKHL-------LSPLFQRSSLGARYTGCRVIALRSVKNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----VSDQFS-----YAPPEVENRTISDGTNIELHGNNFGNSTSLIKVYLNGSDISSE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ITLLRDIQD-----KVTTLYK------GSQLHDTFRFCL-----VTNLTMDSV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -SSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKRNIEDALNOLFRNSSIKSYFS---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -LVTVKALFSSNLDPSLVEQVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DCQVS-----TFRSVPNRHHTGVDSL-CNFSPLARRVDRVAIYEEFLRMTRNGTQLQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                    Indels 298;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
343546
carcinoembryonic antigen-related protein (clone rnCGM1) - rat
carcinoembryonic antigen-related protein (clone rnCGM1) - rat
c;Species: Rattus norvegicus (Norway rat)
C;Date: 17-Aug-1990 #sequence_revision 17-Aug-1990 #text_change 09
C;Accession: 345364
R;Rebsetcok, S.; Lucas, K.; Thompson, J.A.; Zimmermann, W.
J. Biol. Chem. 265, 7872-7879, 1990
J. Biol. Chem. 265, 7872-7879, 1990
A;Title: cDNA and gene analyses imply a novel structure for a rat of the cession: A35364; MUID:90243655; PMID:2335509
      Length 888;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         438 LGFYVLDRDSLFINGYAP -- - ONLSIRGE - YOINFHIVNWNLS -
Query Match
2.9%; Score 115; DB 2; L
Best Local Similarity 19.6%; Pred. No. 10;
Matches 157; Conservative 109; Mismatches 235;
                                                                                                                               REQLYLELSQLTHSITELG----PYTLD-----
                                                                   RPEKDGE---ATG-------VDAICTHRP-
                                                                                                                                                                                                                                                                                                                                                                                                                  AETRVDLLCTYLQPLSGPGLPIKQVFH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | |:: : ||: |
NVTIEEIKL----SPSPN 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NFTLDRSSVLVDGYSPNRN 703
                                                                                                                                                                                                                                                                                                                                               | ::|
344 LECKLD-
                                                                   110
                                                                                                                               137
                                                                                                                                                               190
                                                                                                                                                                                             178
                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                            292
                                                                                                                                                                                                                                                                                                                           250
                                                                                                                                                                                                                                                              215
                                                                                                                                                                                                                                                                                                                                                                                            286
                                                                                                                                                                                                                                                                                                                                                                                                                        399
                                                                                                                                                                                                                                                                                                                                                                                                                                                        333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               822
                                                                                          용
                                                                                                                                                        셤
                                                                                                                                                                                                                        윱
                                                                                                                               ઠે
                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                       쉽
                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                   ઠે
                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

```
C;Accession: T07015
R;Takken, F.L.; Schipper, D.; Nijkamp, H.J.; Hill, J.
Plant J. 14, 401-411, 1998
A;Title: Identification and Ds-tagged isolation of a new gene at the Cf-4 locus of tomato
Cf-4A protein - tomato
C;Species: Lycopersicon esculentum (tomato)
C;Date: 30-Apr-1999 #sequence_revision 30-Apr-1999 #text_change 09-Jul-2004
                                                                                          613
                                                                          740
                                                                                                                                                  RESULT 15
          셤
                                                    ò
                                                                                    셤
```

antig

carcinoembryonic

09-Jul-2004

us-10-687-035-1.rpr

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                         PI
A,Reference number: 215863; MUID:98335213; PMID:9670557
A;Accession: T07015
A;Accession: T07015
A;Accession: T07015
A;Molecule type: DNA
A;Residues: 1-855 <-TAK>
A;Cross-references: UNIPROT:050024; UNIPARC:UPI00009FC28; EMBL:Y12640; NID:e1289424;
A;Experimental source: strain Cf-4; isolate MM-Cf-4
C;Genetics
A;Gene: Cf-4A
A;Map position: 1
                                                                                                                                                                                                                                                                                                                                                      43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       265 VNIAGNIPD-----SFSYLTALHELDMVYTNLSGPIPKPL---WNLTNIE-SLDL-- 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               340 GGLEFLSFNRSWTQLEE-----LDFSSNSLTGPIPSNVSGLRNLQSLYLSSNNLNG 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | :| :| :| :: : : : : : | :| | :| | 391 SIPSWIFDLPSLRSLDLSNNTPSGKIQEFKSKTLSIVTLKQNQLKGPIPNSLLNQESLQF 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      548 LNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTN 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GSATFNSTEGVLQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVG 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 417 PGLDIQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLS----IRGEY----QINF 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            608 YORNKRNIEDALNOLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRV 667
                                                                                                                                                                                                                                                                                                                                                                                                                                              : | | : | | : | | : | | : | | : | | : | | : | : | | : | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | : | | : | : | | : | : | | : | : | : | : | : | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDFTGPGLDREQLYLELSQLTHSITELGP 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YTLD-RDSLYVNGFTHRSSVPTTSTGVVSEE----------PFTLNFTI 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --LDLSDSNF------TGVIPSEISHLSKLHVLRISDQYKLSLGPHNFELLL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NNLRYMADMG-QPGSLKFNITDNVWKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                254 VDLLCTYLQPLSGPGLPIKQVFH----ELSQQTHG--ITRLGPYSLDKDS-----LYLNG 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              303 YNEPG--PDEPPTTPKPATTFLPPLSEA----TTAMGYHLKTLTLNFTISNLQYSPDMGK 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---HDTFRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLVT--NLT--MDSVLVTVKALF----SSNLDPSLVEQVF------LDKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54 LFTLMFTITMLRYEEN------MWPGSRKFNTTERVLQ-----GLLRPLFKNTS
                                                                                                                                                                                                                                                                                                                                                    Indels 293;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 855;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 16
B25039
outer cell wall protein precursor - Bacillus brevis (strain 47)
N;Alternate names: S-layer protein OWP
C;Species: Bacillus brevis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    668 AIYEEFLRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGN 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     469 HIVNW-----NLSNPDPTSSEYITLLRDIQDKVTTL--YKGSQL
                                                                                                                                                                                                                                                                                               2.9%; Score 113.5; DB 2;
llarity 19.6%; Pred. No. 12;
Conservative 111; Mismatches 209;
                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 149; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 6 6 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             $ B $ B $ B $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 6 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         දු ද
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
C;Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 09-Jul-2004
C;Accession: B25039; B28855
B;Tsuboi, A.; Uchihi, R.; Tabata, R.; Takahashi, Y.; Hashiba, H.; Sasaki, T.; Yamagata, I.
J. Bacteriol. 168, 365-373, 1986
A;Title: Characterization of the genes coding for two major cell wall proteins from proteins. Tritle: Characterization of the genes coding for two major cell wall proteins from proteins. A;Recession: B25039
A;Molecule type: DNA
A;Residues: 1-1004 <TSU>A;Coss-references: UNIFROT:P09333; UNIPARC:UPI0000135A27; GB:M14238; NID:G142807; PIDN:A;Residues: 1-1004 <TSU
A;Residues: 1-1004 <TSU
A;Residues: 1-1004 <TSU
A;Adachi, T.; Sasaki, T.; Hayakawa, S.; Yamagata, H.; Tsukagoshi, J. Bacteriol. 170, 935-945, 1988
A;Title: Characterization of the genes for the hexagonally arranged surface layer protein A;Reference number: A91893; MUID:88115203; PMID:2828336
                                                                                                                                                                                                                                                                                                                                      A;Accession: B28555
A;Molecule type: DNA
A;Residues: 1-85 <TS2>
A;Cross-references: UNIPARC:UPI000016E6A4; GB:M19115; NID:g143548; PIDN:AAA22761.1; PID::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGPGLDREQLYLELSQLTHSITE-LGPYTLDRDSLYV-NGFTHRSSVPTTS----- 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQN-LSIRGEYQINFHIVNWNLSN-- 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----PDPTSSEYITLLRDIQDKVTTLYK 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | || :: | :: | :: | 414 ADTTPPTVTKVEAKTNTEIHVTFSETVNG------ADNKANFTLKGVTGNVIPLTKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        756 YVASVQDSDFRIEGYTIAGVETKGEVVTIKVTELDIDDSDATPTVAVIGSVEDL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 374 PLFQKSSMGPFYLGCQLISLRPEK--DGAA-----TGVDTTCTYHP--DPVGPGLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          --TGVVSEEPFTLNFTINNLRYMADMGQPGS---LKFNITDNVMKHLLSPLFQRSSLGAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----GCRVIALRSVKNGA---ETRVDLLCTYLQPLSGPGLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271 IKQVFHELSQQTHGIT-----RLGPYSLDKDSLYLNGYNEPGPDEPPTTPKPATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FLPPLS-----EATTAMGYHLKTLTLNFTISNLQY-SPDMGKGSATFNSTEGVLOHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---KRNASGPF-----EPQKAIDGVSAPDKEAPVVIGVEAGKTYNTAVTPDSADKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----PKNTSVGPLYSGCRLTLLRPEKDG-----EATGVDAICTHRP-----DP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPGSRKFNTTERVLOGLLRPL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels 195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Start codon: GTG
C;Keywords: cell wall
F;1-24/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.9%; Score 113.5; DB 2;
18.9%; Pred. No. 16;
tive 88; Mismatches 212;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -------X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 2.99
Best Local Similarity 18.99
Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----GSQLHD 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    956 SEDAGSKVTD 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
```

```
inclusion pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Molecule type: genomic RNA
;Residues: 1-3344 <YEH1>
;Cross-references: UNIPROT:Q01901; UNIPARC:UPI0000131E61; GB:S46722; NID:g258106; PIDN:;
Accession: PQ0509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Experimental source: type P, strain HA
Superfamily: tobacco etch virus genome polyprotein
Feywords ATP; coat protein; cylindrical inclusion protein; genome-linked protein; incl
Feywords ATP; coat protein; cylindrical inclusion protein; genome-linked protein; incl
Feywords: 63% protein #status predicted <PRO>
FORD>
FORDACT: 63% protein #status predicted <PRO>
FORD>
FORDACT: 46% protein #status predicted <PRT>
FORDACT: 64% protein #status predicted <PRT>
FORDACT: 64% protein #status protein #status predicted <CIP>
FORDACT: 64% protein motieotide-binding motif B
FORDACT: 64% protein motieotide-binding motif B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Molecule type: genomic RNA
Residues: 2561-3344 <WAN>
Cross-references: UNIPARC:UP10000170FCB; EMBL:X67672; NID:g62378; PIDN:CAA47904.1; PID
                                                                                                                                                                                                genome polyprotein - papaya ringspot virus
N;Contains: 46K protein; 63K protein; 6K protein; coat protein; cylindrical inclusion pr.
C;Species papaya ringspot virus, PRSV
C;Species 30-Sep-1993 #sequence revision 20-Aug-1994 #text_change 09-Jul-2004
C;Accession: JQ1899; PQ0509; Ā56603; S24785; S35725
C;Accession: JQ1899; PQ0509; Ā56603; S24785; S35725
J, Gen. Virol. 73, 2531-2541, 1992
A;Title: Complete nucleotide sequence and genetic organization of papaya ringspot virus A;Reference number: JQ1899; MUID:93019006; PMID:1402799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title: Nucleotide sequence comparison of the 3'-terminal regions of severe, mild, Reference number: A56603; MUID:93090098; PMID:1456896
                                          994 PTLFATDV-NFTQD---ALVAGELITQN--FYGNITSANI---GSRITIGNANVTQTNIT 1044
      733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1748 GERIQRIGRVGRHKEGIALRIGHTEKGIQEIPEMAATEAAFL-----SFTYGLPVMT 1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           341 LNFTISNLQYSPDMGKGSATFNSTEGVLQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGA 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   401 ATGVDTTCTYHPDPVGPGLDIQQLYWEL-----SQLTHGVTQLGFYVLDRDSLFIN 451
      -SADIQHSGGRSSLEGPRFEQKLIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---SSLGARYTGCRVIALRSVKNGARTRVDLLCTYLQPLSGPGLPIKQVFHELSQQT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 283 -HGITRLGPYSLDKDSLYLN-GYNEPGPDBPPTTPKPATTPLPPLSEATTAMGYHLKTLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1800 HNVGLSLLK-----LNCTVRQARTMQQYELSPFFTQN------LUVNF----DG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 229; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12094-2520/Product: nuclear inclusion a protein #status predicted <NIA> 5221-3037/Product: nuclear inclusion b protein #status predicted <NIB> 3038-3344/Product: coat protein #status predicted <COP> 13038-3344/Product: coat protein #status predicted <COP> 1256/Binding site: phosphoryl-RNA (Tyr) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           175 VPTTSTGVVSEEPPTLNFTINNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Molecule type: protein
Residues: 548-554;1402-1410 <YEH2>
Cross-references: UNIPARC:UP1000017874F; UNIPARC:UP10000178750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               093/Product: 6K protein #status predicted <PRI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 2.9%; Score 113.5; DB 2; Best Local Similarity 19.0%; Pred. No. 1.1e+02; Matches 133; Conservative 97; Mismatches 240;
676 MTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGN-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , C.H.; Yeh, S.D. Virol. 127, 345-354, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Accession: JQ1899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Accession: A56603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1837
   장. 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                П
                                                                                                                                                                                                                                                                                                                                                EMBL: U42580; NID: 94028896;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITNLRYBENM--WPGSRKFNTTERVLQGLLRPLFKNTSV--GPLYSGCRLTLLRPEKDG 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341 AVGNLISADNTSEFANITSFTTNGLVVNGNIIAAIGNGNVFLANVITANSLTL----QSS 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---PDPTGPGLDREQLYLELSQLTHSITELGPYTLD 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161 RDSLYVN-----GPTHRSSVPTTSTGVVSERPFTLN-------PTINNLRYMADM 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GNTYVYSANTGVLTANV-GNVFGTLTVGVANVTSMVSNALFANTAVVSNLSVSNLTVT-- 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    255 DLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLRP 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ITGNANVSTTTSNVITTGGF---TITGNITSGLL--TSNVIAGNITMYNTSNT----T 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---AATGVD 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TICTYHPDPVGP-GLDIQQLYWELSQLTHGVTQLGFYVLDRDSLFIN-----GYAP-QNL 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L'FTSNTSNIANFFAGNMTAVNTIVSNLEIQGNSVVITQTTPFKVTSVLLANVLFANTIIS 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   937 AIGNLISTRNLTAANLISSSDLFNSGPYTSSONVTIDTL-NFT--AGNLGTVAARTTITT 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
         hypothetical protein A14R - Chlorella virus PBCV-1
C;Species: Chlorella virus PBCV-1
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
C;Accession: T17504
R;Graves, M.V.; Van Etten, J.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           --ISSDISNISITGNTSGNVF---AANIATIGTLNTANVVANLVASNVMNAWVTSNIRTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  737 NTPTTTANVVGNISTDIANI------GIANVNP--LNTTDPAVNTANIVNYTPTSNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G-----QPGSLKFNITDNVMKHLLSPLFQRSSL--GARYTGCRVIALRSVKNGAETRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIRGBYQ-----INFHIVNWNLSNPDPTSSEYITLLRDIQDKVTTLYKGSQLHDTFRFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VY---QPTSSSSTQHFYLNFTITNLPYSQD----KAQPGTTNYQRNKRNIEDALNQLFRNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIKSYFSDCQVST-----FRSVP--NRHHTGVDSLCNFSPLARRVDRVAIYEEFLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       513 LVTNLTMDSVLVTVKALFSSNLDPSLVEQVPLDKTLNASFHWLGSTYQLVDIHVTEMESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TKLFTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSA---ASHLLILF-----TL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 2.9%; Score 113.5; DB 2; Length 1369; Best Local Similarity 21.3%; Pred. No. 26; Matches 179; Conservative 116; Mismatches 352; Indels 193;
                                                                                                                                                                                                                                                                                                                                       A;Cross-references: UNIPROT:Q89349; UNIPARC:UP100000F912E; E
A;Experimental source: specific host Chlorella strain NC64A
C;Genetics:
A;Gene: A14R
                                                                                                                                                                                                                   A;Accession: T17504
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LF--OKSSMGPFYLG----CQLISLRPEKDG-
                                                                                              C,Accession: T17504
R,Graves, M.V.; Van Etten, J.L.
submitted to the EMBL Data Library, May 1999
A,Reference number: Z18806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EATGVDAICTHR-
                                                                                                                                                                                                                                                                                                        A; Residues: 1-1369 <GRA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         627
```

g

ઠ

셤

ò

g

ò 유 ò

ò

ઢ g ઠ 셤 ò 윱 ठे 셤 ઠે 셤 ઠે 윱 ò 셤 ò g

and

```
A,Molecule type: protein.
A;Molecule type: 2822-2859 < PE2.
A;Residues: 2822-2859 < PE2.
A;Cross-references: UNIPARC:UPI0000179214
A;Cross-references: UNIPARC:UPI0000179214
A;Cross-this peptide, designated proline-rich polypeptide IV, can be found at several loc C;Genetics:
C;Genetics: #status absent
A;Introns: #status absent
A;Note: single copy gene with no introns
C;Keywords: prostet; tandem repeat
C;Keywords: prostet; tandem repeat
F;1-26_Domain: signal sequence #status predicted <NA)
F;27-5761/Product: prostatic proline-rich peptides 637K proprotein #status predicted <NA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: DNA
A;Residues: 1-838 <POH>
A;Cross-references: UNIPROT:P36159; UNIPARC:UP1000052ED3; EMBL:Z28304; NID:9486556; PIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPRSTOSK---SYKTIKHED----LALTITPEPSLEDGSILFPQEDLLOP-----ID 815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGT 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     350 YSPDMGKGSATFNST------BGVLQHLLRP-LFQKSSMGPFYLGCQLIS---- 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -- YNSKQVDLSS 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         607 KPMEMGTSPVYYDAAAAPBEVEFLSDQQGVLSQSLEPILYDSLSQQEYTTGISQISBGGE 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         549 ATEYDEEFKTSATEQEQLAQFPENDEVTVLPSNHYQAQHSILSNVTDQPLDLDITIT--E 606
                                                                                                                                                                                                                                                                                                                      31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    210 KFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETRVDLLCTYLQPLSGPGL 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           317
                                                                                                                                                                                                                                                                                                                                                                       111 PEKDGEATGVDAICTHRPD------PT-----GPGLDREQLYLELS---QLTH 149
                                                                                                                                                                                                                                                                                                                                                                                                                              413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hypothetical protein YKR079c - yeast (Saccharomyces cerevisiae)
hypothes: Saccharomyces cerevisiae
C;Species: Saccharomyces cerevisiae
C;Date: 03-May-1994 #sequence_revision 03-May-1994 #text_change 09-Jul-2004
C;Accession: S3815
R;Pohl, T.M.; Pohl, F.M.
Bibmitted to the Protein Sequence Database, March 1994
A;Reference number: S37897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---LRPEKDGAATGVDITCTYHP----DPVGPGLDIQQLYWELSQLTHGVTQLGFYVLDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           667 РЕРТООВТРЕНЅУСИМНТЕЕVАОРРСИНЕVТСРРІСНСОVНSРАГС------NILTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  488 LLRDIQDKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSN--LDPSLVEQVFLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TIX----
                                                                                                                                                                                                                                                                                                                                                                                                        150 SITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        270 PIKQVFHBLSQQTHGITRLGPYSLDKDSLYLNGYNBPGPDEPPTT-----PKP
                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                            Indels 203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    446 DSLF--INGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSE------
                                                                                                                                                                                                                                                                     Length 5762;
                                                                                                                                                                                                                                                                        2.9%; Score 113.5; DB 2;
19.8%; Pred. No. 2.6e+02;
tive 79; Mismatches 224;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        318 ATTF-------DPDLSEATTAMGYHLKT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STGGGEFSHIKTSTLSKPPYVSNTKSSAFQÈTMSETT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TNYQRNK-----RNIEDALNQLFRNSSIKS 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.9°
Query Match
Best Local Similarity 19.8°
Matches 125; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: S38156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA; mRNA
A; Molecule type: DNA; mRNA
A; Residues: 1-3706, 'I', 3708-4077,'F',4079-4155,'S',4157-5761 <DE2>
A; Residues: 1-3706,'I', 3708-4077,'F',4079-4155,'S',4157-5761 <DE2>
A; Residues: 1-3706,'I', 3708-4077,'F',4079-4155,'S',4157-5761 <DE2>
A; Residues: 1-3706,'I', 3708-4077,'F',4079-4155,'S',4157-5761 <DE2>
A; Reperimental source: ventrated broad in the mucleotide translation
A; Note: sequence extracted from NCBI backbone (NCBIN:100347, NCBIP:100348)
A; Note: sequence extracted from NCBI backbone (NCBIN:100347, NCBIP:100348)
A; Reference number: A41819
A; Reference number: A41819
A; Reference type: DNA
A; Residues: 1-5762 <DE2>
A; Residues: 1-5762 <DE3>
A; Residues: 1-5762 <DE3>
A; Cross-references: UNIPARC:UP1000017CF38
A; Researchoce, K.; Peeters, B.; Dirckx, L.; Claessens, F.; De Clercq, N.; Heyns, W.; Wind A; Heben a single 12.5-kilobase androgen-regulated mRNA encoding multiple proline-rich parameter and parameters.
A; Research and parameters and parameters and parameters and parameters.
A; Research and parameters and parameters and parameters and parameters and parameters.
A; Research and parameters and parameters and parameters and parameters.
A; Research and parameters and parameters and parameters and parameters and parameters.
A; Research and parameters and parameters and parameters and parameters.
A; Research and parameters and parameters and parameters and parameters.
A; Research and parameters and par
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A,Molecule type: protein
A,Residues: 2020-2057 <PEE>
A,Cross-references: UNIPARC:UPI0000179213
A,Note: this peptide, designated proline-rich polypeptide V, can be found at several loc
A,Accession: A20593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cross-references: UNIPARC:UP100000E5F03; GB:M20721; GB:J04188; NID:g206397; PIDN:AAA41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         급
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The primary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus (Norway rat)
C;Species: 13-May-1992 #sequence revision 13-May-1992 #text_change 31-Dec-2004
C;Date: 13-May-1992 #sequence revision 13-May-1992 #text_change 31-Dec-2004
C;Accession: A42663; A41819; A41819; A41819; A41819; W.
F;De Clercq, N.; Hemschoote, K.; Devos, A.; Peeters, B.; Heyns, W.; Rombauts, W.
J. Biol. Chem. 267, 9884-9894, 1992
A;Title: The 4.4-kilodalton proline-rich polypeptides of the rat ventral prostate are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2148 KT------KKF--VATYGFKPEDYSYVRYLDPLTGETLDESPQTDISMVQDHFSDIRR 2197
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1973
                                                                                                                                                                                                                                                                     1974 SSFSLLGVINTIQSRYLVDHSVENIRKLQLAKAQIQQLEAHMQENNVENLIQSLGAVRAV 2033
                                                                                                                                                                                                                                                                                                                                                                          2034 YHQSVDGFKHIKRELGLKGVWDGSLMIKDAIVCGFTWAGGAMLLYQHFRDKFTNVHVFHQ 2093
                                        |::|: :: ||| :| |
|-----LIKDVPER---LYK--ELWDIVQT 1913
                                                                                                                                                                                                                       573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     652 DSLCNFSPLARRVDRVALY---EEFLRWTRNGTQLQNFTLDRS-----SVLVDGYSPNRN 703
                                                                                                               549
                                                                                                                                                                                                                                                                                                                                                                                                                                   651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ------QHFYLNFTITNLPYS
                                                                                                                                                                                                                                                                                                                                                                                                                                 598 QDKAQPGTINYQRNKRNIEDALN-QLFR----NSSIKSYFSDCQVSTFRSVPNRHHTGV
          GYAPQNISIRGEYQINFHIVNWNLSNPDPTSSEYITILRDIQDKVTTLYKGSQLHD----
                                                                                                                  -----LVTV-KALFSSNLDPSLVEQVFLDKTLN
                                                                                                                                                                                                                          ΛS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704 EPLTGNSADIQHSGGRSSLEG--PRFEQKLISBEDLNMH 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Reference number: A42663; MUID:92250652; PMID:1577819
                                                                                                                                                                                                                               ----OLVDIHVTEMES--
                                                                                                                                                                                                                                  ASFHWLG-----STY----
                                                                                                                                ---TFRFCLVTNLTMDSV-
                                                           1882 G----RLCLEGDVRIPF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Accession: A31966
Molecule type: mRNA
Residues: 3372-3540 <HEM>
                                                                                                                                                                                                                                                                                                                                         574 YQPTSSSST--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2094
                                                                                                                                                                                                                                          550
                                                                                                                                  508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 19
A41819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                            g
                                                                                                                                                                                                                                    ઠે
                                                                                                                                  ઠ
```

```
30;
                                                                                                                                                                                                               190 LNFTINNLRYMADMGQPGSLKFNI--TDNVMKHLLSPLFQRSSLGARYTGCRVIALRS-- 245
                                                                                                                                                                                                                                         305 EPGPDE--PPTTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFN 362
                                                                                                                                                                                                                                                                                                                                                                                                               363 STEGVLOHLLR-PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPG--- 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----LDI-QQLY------WELSQLTHGVTQLGFYVLDRDSLFI------ 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         252 FAKVLILDIPDDLYLNAFVEKFKDYDCAELGMVYYFLGDEVTINDNLFAFIDIFEKNNYG 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    246 -VKNGARTRVDILCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYN 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          209 VERAIKLGVPKGPLFAKLTKG------QTITL-------DNGIVVTPEQVLENERH 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----NGYAPQNLSIRGE-----YQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 312 KVNHMISHNKISPNTISFPGSALTTLKIKALQVN----NYNLPKTDRVFS-----KDFY 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     494 DKV-TTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSN----LDPSLVEQVFLDKTL 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  417 NGEVADFSW----QEIFEEHVXPLEFPLADVDTVINNQLHVDNFNNSAEKKKHVEIITLG 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           590 -----TITNLPYSQDKAQPGTTNYQRN-----KRNIEDALNQLFRNSSIKS 630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                473 TGSALPSKYRNVVSTLVKVPFTD--ADGNTIN--RNIMLDAGENTLGTIHRMFSQLAVKS 528
                                                                                                                                                                                                                                                                                                                                       134 VLKNGGEDRLGVFDSFQK-----SIVAKMFP
                                                                                                                          2.9%; Score 112.5; DB 2; Length 838;
19.1%; Pred. No. 14;
tive 82; Mismatches 173; Indels 203; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          549 N --- ASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNF------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              631 YPSDCQVSTFRSVPNRHHTGVDSLCN 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A,Experimental source: strain S288C
C,Genetics:
A,Gene: MIPS:YKR079c
A,Cross-references: SGD:S0001787
A,Map position: 11R
                                                                                                                            Query Match
Best Local Similarity 19.19
Matches 108; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     451
                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

Search completed: March 20, 2006, 07:36:24 Job time : 36.2939 secs

(DIASU) XNAJA 39A9 SIri (

us-10-687-035-1.rapbn

```
111
110.5
110
110
110
1109.5
109.5
109.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        108.5
108.5
108.5
108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    107.5
106.5
106.5
106.5
106.5
106.1
106.1
106.1
106.1
106.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 6, Appl
Sequence 15, Appl
Sequence 17, Appl
Sequence 129, Appl
Sequence 128, Appl
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 17, Appl
Sequence 15, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 314, App
Sequence 6, Appli
Sequence 6, Appli
                                                                                                                                                     March 20, 2006, 07:32:13 ; Search time 14.0158 Seconds (without alignments) 1527.558 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                   AAQPARRARRIKLFTHRSSV.....QKLISEEDLNMHTGHHHHHH 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Published Applications AA New:*

1: /cgn2_6/ptodata/2/pubpaa/USOB_NEW_PUB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/USO7_NEW_PUB.pep:*
3: /cgn2_6/ptodata/2/pubpaa/USO7_NEW_PUB.pep:*
4: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
5: /cgn2_6/ptodata/2/pubpaa/USIO_NEW_PUB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/USIO_NEW_PUB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/USIO_NEW_PUB.pep:*
8: /cgn2_6/ptodata/2/pubpaa/USIO_NEW_PUB.pep:*
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-11-033-039-314
US-11-046-456-6
US-110-046-644-6
US-10-952-535A-15
US-10-952-535A-17
US-10-952-535A-17
US-10-913-56-128
US-11-108-172-1065
US-11-193-789-2
US-11-193-789-2
US-11-193-789-2
US-11-193-789-2
US-11-193-866-2
US-11-193-866-17
US-11-193-866-17
US-11-193-866-17
US-11-193-866-17
US-11-193-866-17
US-11-193-866-17
US-11-193-866-17
US-11-193-866-15
US-11-193-866-15
US-11-193-866-15
US-11-193-866-15
US-11-193-866-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          169630 segs, 28622889 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries
                                                                                                  protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB seq length: 0
DB seq length: 200000000
                                                                                                                                                                                                                                                        US-10-687-035-1
3945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1890
3008
10890
11890
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
2020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202020
202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
Match
                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3658
1166.5
134.5
134.5
134.5
134.5
134.5
136.5
118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
1118.5
118.5
118.5
118.5
118.5
118.5
118.5
118.5
118.5
118.5
118.5
118.5
1
                                                                                                        •
                                                                                                  OM protein
                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum I
Maximum I
                                                                                                                                                           ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run
```

```
21, Appl
21, Appl
21, Appl
21, Appl
21, Appl
22, Appl
22, Appl
22, Appl
22, Appl
23, Appl
23, Appl
23, Appl
21, Appl
22, Appl
22, Appl
22, Appl
23, Appl
24, Appl
26, Appl
26, Appl
27, Appl
28, Appl
38,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69, Appl
3488, Ap
174, App
47, Appl
65, Appl
97, Appl
107, Appl
1136, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24714, P
24713, P
24712, P
Sequence
Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Seq
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-11-075-047A-107
US-11-075-047A-107
US-11-183-185-26
US-11-1084-074A-63
US-11-064-774A-63
US-11-096-56BA-24713
US-11-096-56BA-24713
US-11-064-774A-61
US-11-064-774A-91
US-11-064-774A-103
US-11-064-774A-103
US-11-064-774A-103
US-11-064-774A-103
US-11-064-774A-103
US-11-064-774A-107
US-11-064-774A-107
US-11-064-774A-117
US-11-064-774A-117
US-11-064-774A-117
US-11-064-774A-117
US-11-064-774A-117
US-11-064-774A-117
US-11-064-774A-117
US-11-064-774A-117
US-11-064-774A-117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -372-1132
-568A-3258
                        US-11-094-071-31
US-11-201-347-25
US-11-120-476-46
US-11-120-476-46
US-11-064-774A-57
US-11-064-774A-89
US-11-064-774A-89
US-11-193-561-25
US-11-193-771-25
US-11-193-789-25
US-11-193-805-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5-561-867
4-774A-53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-11-064-774A-71
US-11-087-099-9802
   117
113.5
112.5
112.5
112.1
111
111
111
111
111
111
111
```

```
APPLICANT: Boyle, Bryan
APPLICANT: Funk, Walter
APPLICANT: Funk, Walter
APPLICANT: Funk, Walter
APPLICANT: Funk, Walter
APPLICANT: Farkitani, Makoto
APPLICANT: Park, Eun Ju
APPLICANT: Tomizuka, Kazuma
APPLICANT: OF INVERTION WUMBER: US/11/046,456
CURRENT APPLICATION NUMBER: US 60/519,605
PRIOR FILING DATE: 2004-01-015
PRIOR FILING DATE: 2004-10-15
PRIOR PILING DATE: 2004-10-15
PRIOR FILING DATE: 2004-03-03
PRIOR FILING DATE: 2004-03-03
PRIOR FILING DATE: 2002-08-30
NUMBER OF SEQ ID NOS: 182
SOPTWARE: Patentin version 3.3
SOPTWARE: Patentin version 3.3
1675 WLOSTYQLVDIHVTEMESSVYQPISSSSTQHFYPNFIITNLPYSQDKAQPGTINYQRNKR 1734
                                                                                               APPLICANT: Boyle, Bryan
APPLICANT: Boyle, Bryan
APPLICANT: Funk, Walter
APPLICANT: Kakitani, Makoto
APPLICANT: Oshima, Takeshi
APPLICANT: Park, Emily
APPLICANT: Tang, Y. Tom
APPLICANT: Tomizuka, Kazuma
APPLICANT: Yogi, Mikio
TITLE OF INVENTION: Gastrointestinal Proliferative Factor and uses thereof
FILE REFERENCE: 11926-1940.
CURRENT APPLICATION NUMBER: US/11/046,644
CURRENT FILING DATE: 2005-01-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            262 PAKGNSADIQHSGGRSSLEGPRFEGKPIPNPLLGLDSTRTGHFHFHH 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  705 PLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNM---HTGHHHHHH
                                                                                                                                                                                         1795 LEMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 1831
                                                                                                                                                             674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 166.5; DB 7
Pred. No. 7.3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 6, Application US/11046644
Publication No. US20050256036A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: GIPF V5His tag
                                                                                                                                                                                                                                                                                                                    Sequence 6, Application US/11046456 Publication No. US20050256044A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 70.2%;
Matches 33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
US-11-046-644-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-11-046-456-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                   ઠ
                                                                                                                 셤
                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1195 SRKFWITERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGBATGVDALCTHRPDPTGP 1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1375 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GVTOLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 494 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      74 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDFTGP 133
                    Sequence 870, App
Sequence 868, App
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PL FOKSSMGPFYLGCOLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                               APPLICANT: XU, MINZHEN
TITLE OF INVENTION: LI-ERY/ANTIGENIC EPITOPE HYBRID PEPTIDE VACCINES
FILE REFERENCE: REH-2017US0.
CURRENT APPLICATION NUMBER: US/11/033,039
CURRENT FILING DATE: 2005-01-11
PRIOR APPLICATION NUMBER: 10/245,871
PRIOR PLING DATE: 2002-09-17
PRIOR PLING DATE: 2002-09-17
PRIOR PLING DATE: 2002-09-14
PRIOR PLING DATE: 1999-09-14
NUMBER OF SEQ ID NOS: 1452
SOFTWARE: PATENTIN VERSION 3.3
SOFTWARE: PATENTIN VERSION 3.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 3658; DB 7; Length 1890;
Pred. No. 1.2e-287;
1; Mismatches 1; Indels 0.
                         US-10-995-561-870
US-10-995-561-868
                                                                                                                 ALIGNMENTS
                                                                                                                                                                                                                          Sequence 314, Application US/11033039
Publication No. US20060002947A1
GENERAL INFORMATION:
APPLICANT: HUMPHREYS, ROBERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 92.7%;
Best Local Similarity 99.7%;
Matches 695; Conservative
                           1234
1366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
CRGANISM: Homo sapiens
US-11-033-039-314
                                                                                                                                                                                       RESULT 1
US-11-033-039-314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 374
```

셤

ઠે

g ò g ò 셤 ઠે 셤 δ

셤 ò 유 ઠે 셤 ò

```
SOFTWARE: Patentin Ver.
SEQ ID NO 16
LENGTH: 123
                     NUMBER OF SEQ ID
                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Messer, Anne
APPLICANT: Messer, Anne
APPLICANT: Lecerf, Jean-Michel
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR INHIBITING POLYPEPTIDE
TITLE OF INVENTION: ACCUMULATION ASSOCIATED WITH NEUROLOGICAL DISORDERS
FILE REPERENCE: INR-04CP
CURRENT PPLICATION NUMBER: US/10/952,535A
CURRENT PILING DATE: 2004-09-27
PRIOR APPLICATION NUMBER: 60/146,047
PRIOR FILING DATE: 1999-07-27
NUMBER OF SEQ ID NOS: 45
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Huston, James S.

APPLICANT: Messer, Anne
APPLICANT: Messer, Anne
APPLICANT: Lecerf, Jean-Michel
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR INHIBITING POLYPEPTIDE
TITLE OF INVENTION: ACCUMULATION ASSOCIATED WITH NEUROLOGICAL DISORDERS
PILE REPERENCE: INR-04CP
CURRENT APPLICATION NUMBER: US/10/952,535A

CURRENT FILING DATE: 2004-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ) OTHER INFORMATION: Description of Artificial Sequence: Synthetic ; OTHER INFORMATION: Construct US-10-952-535A-15
                                                                                                                                                                                                                                                                                                                                     DB 7; Length 308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     262 PAKGNSADIQHSGGRSSLEGPRFEGKPIPNPLLGLDSTRTGHHHHHH 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.4%; Score 134.5; DB 6; Length 98; 78.1%; Pred. No. 0.0005; tive 1; Mismatches 5; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                        705 PLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNM---HTGHHHHHH
                                                                                                                                                                                                                                                                                                                                                        .3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      717 GGRSSLEGPRFEQKLISEEDLNMHTGHHHHHH 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68 GGSTMSRGP-PEQKLISEEDLNWHTEHHHHHH 98
                                                                                                                                                                                                                                                                                                                                                                                1; Mismatches
                                                                                                                                                                                                                                                                                                                                     Score 166.5;
Pred. No. 7.3
PRIOR APPLICATION NUMBER. 20127
PRIOR FILING DATE: 2004-01-27
PRIOR PALICATION NUMBER: US 60/619,241
PRIOR PLINIG DATE: 2004-10-15
NUMBER OF SEQ ID NOS: 178
SEQ ID NO 6
LENGTH: 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15, Application US/10952535A Publication No. US20050255113A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 16, Application US/10952535A Publication No. US20050255113A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/146,047
PRIOR FILING DATE: 1999-07-27
                                                                                                                                                                                                                                                           ; OTHER INFORMATION: GIPF V5His tag
US-11-046-644-6
                                                                                                                                                                                         TYPE: PRT
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 70.2%;
Matches 33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Huston, James S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -535A-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-952-535A-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 15
LENGTH: 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

```
Gaps
                                                ) OTHER INFORMATION: Description of Artificial Sequence: Synthetic; OTHER INFORMATION: Construct
US-10-952-535A-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Synthetic
OTHER INFORMATION: Construct
OTHER INFORMATION: CONSTRUCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Ready, Ramachandra
APPLICANT: Reddy, Ramachandra
APPLICANT: Reddy, Ramachandra
APPLICANT: Reddy, Ramachandra
APPLICANT: Gill, Parkash
TITLE OF INVENTION: POLYPEPTIDE COMPOUNDS FOR INHIBITING
TITLE OF INVENTION: ANGIOGRNESIS AND TUMOR GROWTH
FILE REPRENCE: VASG-PO2-002
CURRENT APPLICATION NUMBER: US, 10/949, 720
CURRENT PILING DATE: 2004-09-23
FRIOR APPLICATION NUMBER: US, 60/454, 432
FRIOR APPLICATION NUMBER: US 60/454, 300
                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 6;
                                                                                                                                                             DB 6;
                                                                                                                                                          Score 134.5; DB 6
Pred. No. 0.00071;
1; Mismatches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
3.4%; Score 134.5; DB
Best Local Similarity 78.1%; Pred. No. 0.001;
Matches 25; Conservative 1; Mismatches
                                                                                                                                                                                                                                                                 717 GGRSSLEGPRFEQKLISEEDLNMHTGHHHHHH 748
                                                                                                                                                                                                                                                                                               125 GGSTWSRGP-FEQKLISEEDLNMHTEHHHHHH 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         717 GGRSSLEGPRFEOKLISEEDLINMHTGHHHHHH 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Messer, Anne
APPLICANT: Lecerf, Jean-Michel
TITLE OF INVENTION: METHODS AND COMPOSITIONS
TITLE OF INVENTION: ACCUMULATION ASSOCIATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REPERENCE: INR-064CP;
CURRENT APPLICATION NUMBER: US/10/952,535A;
CURRENT FILING DATE: 2004-09-27;
FRIOR APPLICATION NUMBER: 60/146,047
FRIOR FILING DATE: 1999-07-27;
NUMBER OF SEQ ID NOS: 45
SOFTWARE: Patentin Ver. 2.0
; SOFTWARE: Patentin Ver. 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 17, Application US/10952535A Publication Wo. US20050255113A1 GENERAL INFORMATION:
APPLICANT: Huston, James S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 419, Application US/10949720
Publication No. US20050249736A1
GENERAL INFORMATION:
APPLICANT: Krasnoperov, Valery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zozulya, Sergey
Kertesz, Nathalie
Reddy, Ramachandra
Gill, Parkash
ORGANISM: Artificial Sequence PEATURE:
                                                                                                                                                        Query Match
Best Local Similarity 78.1%;
Matches 25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-952-535A-17
```

us-10-687-035-1.rapbn

```
363 LTISDVSVLLIGGGERRYRAMVŠAT---GIŠLGAMAGKGGGVŠEWMLGIENGVLLLAGVV 419
                                                                                                                                                                                                                                                                                                                                                                                                                           420 VALAEVPLCTRVEAEPDASSTHHSTVPPLTSSNHST-SPQLSTGVSFFFLSFHISNLOFN 478
                                                                                                                                                                                                                                             303 SEMFLQIYKQGGFLGLSNIKERPGSVVVQLTLAFREGTINVHDVETQFNQYKTEAASRYN 362
375 LFOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGFGLDIQQLYWELSQLTHG 434
                                                                                                                                   517 LIMDSVLVIV-----KALFSSNLDPSLVEQVFLDKTLNASFHWLG------
                                                                                                                                                                                                                                                                                                                                                                                               557 ------STYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYS
                                                                                                  135 VTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVN--WNLSNPDFISSEYITLLRDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 2000-01-10
PRIOR APPLICATION NUMBER: US 09/476,296
PRIOR FILING DATE: 1999-1-30
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 1130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: COMPOUNDS FOR IMMUNOTHERAPY AND DIAGNOSIS TITLE OF INVENTION: OF COLON CANCER AND METHODS FOR THEIR USE FILE REFERENCE: 210121.471C15
CURRENT APPLICATION NUMBER: US/11/108,172
CURRENT FILING DATE: 2005-04-15
                                                                                                                                                                                                       493 QDKVTTLYK------GS---QLHDTFRFCLVT---
                                        CURRENT FILING DATE: 2003-04-13
PRIOR APPLICATION NUMBER: US 10/025,380
PRIOR FILING DATE: 2001-12-19
PRIOR PILING DATE: 2001-08-03
PRIOR PILING DATE: 2001-08-03
PRIOR PLILNG DATE: 2001-08-10
PRIOR APPLICATION NUMBER: US 09/649,811
PRIOR PILING DATE: 2000-08-28
PRIOR PILING DATE: 2000-08-28
PRIOR APPLICATION NUMBER: US 09/609,448
PRIOR PILING DATE: 2000-06-29
PRIOR PILING DATE: 2000-06-19
PRIOR PLILNG DATE: 2000-06-19
PRIOR PLILNG DATE: 2000-06-19
PRIOR APPLICATION NUMBER: US 09/575,251
PRIOR APPLICATION NUMBER: US 09/575,444
PRIOR PILING DATE: 2000-03-06
PRIOR APPLICATION NUMBER: US 09/519,444
PRIOR PILING DATE: 2000-03-06
PRIOR PLILNG DATE: 2000-03-06
PRIOR PLILNG DATE: 2000-03-06
PRIOR PLILNG DATE: 2000-03-06
PRIOR PLILNG DATE: 2000-02-15
PRIOR PLILNG DATE: 2000-02-15
PRIOR PLILNG DATE: 2000-02-15
PRIOR PLILNG DATE: 2000-02-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         598 QDKAQPGTTNYQRNKRNIEDALNQL 622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1065, Application US/11108172
Publication No. US20050260177A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Xu, Jiangchun
APPLICANT: Lodes, Michael J.
APPLICANT: Secrist, Heather
APPLICANT: Benson, Darin R.
APPLICANT: Meagher, Madleine Joy
APPLICANT: Stolk, John A.
APPLICANT: Wang, Tongtong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jiang, Yuqiu
Smith, Carole L.
King, Gordon B.
Wang, Aljun
Clapper, Jonathan D.
Skeiky, Yasir A. W.
Fanger, Gary R.
Vedvick Thomas S.
Carter, Darrick
                                                                                                                                                                         261 T-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-11-108-172-1065
                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                        쉱
                                                                                                                                                              ద
                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                        ð
                                                                         원
                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: dialbexus, Inc.
APPLICANT: dialbexus, Inc.
APPLICANT: dialbexus, Inc.
APPLICANT: Salceda, Susana
APPLICANT: Salceda, Susana
APPLICANT: Turner, Leah R.
APPLICANT: Turner, Leah R.
APPLICANT: Sun, Yongming
APPLICANT: Liu, Chenghua
TITLE OF INVENTION: Compositions and Methods Relating to Breast Specific Genes and PR
FILE REPERENCE: DEX-0432
CURRENT APPLICATION NUMBER: US/10/517,696
CURRENT APPLICATION NUMBER: US 60/389,327
PRIOR PILING DATE: 2002-06-14
NUMBER OF SEQ ID NOS: 171
SOFTWARE: Patentin Version 3.1
SEQ ID NO 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              266 GPGLPIKQVFHELSQOTHGITRLGPYSLDKDSLYLNGYNEPGP------DEPPIT 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            315 PKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLRP 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      155 PAPGST-APPAHGVTSAPDNRPALGSTAPPVHNVTSASGSASGSASTIVHNGTSARATTT 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 151 ITELGPYTLDRDSLYVNGFTHRSSVP-----TISTGVVSEEPFTLNFTINNLRYMADMGQ 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              206 PGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETRVDLLCTYLQPLS 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            114 RPAL-----GSTTPPAHDVTSAPD-------NKPAPGSTAPPAHGVTSAPDTR 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15 LTVLTATTAPKPATVVTGSGHASSTPGGEKETSATQRSSVPSSTEKNAVSMTSSVLSSHS 74
                                                                                                                                                                                                                                                                                                                                                         œ,
                                                                                                                                                                                                                                                                                                                                                                                                       672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    673 --FLRMTRNGTQLQNFTLDR-SSVLVD-----GYSP----NRNEPLTGNSADIQHSGG 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  251 PEPVNVTTDREVPPAVSDIRVTRSSPSSLSLAMAVPRAPSGAMLDYBVKYHEKGAEGPSS 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels 169; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    632 FSDCQVSTFRSVP-----NRHHTGVDSLCNFSPLARR---VDRVALYEE-----
                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                            38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 614;
                                                                                                                                                                                                                                                                                                         3.3%; Score 130; DB 6; Length 401
32.7%; Pred. No. 0.01;
tive 12; Mismatches 53; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 75 pgs--gssttqqqdvtLapatepasgsaatwdqdvtsv-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.2%; Score 126.5; DB 6;
19.5%; Pred. No. 0.037;
tive 63; Mismatches 223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         719 RSSLEGPRFEQKLISEEDLNM---HTGHHHHHH 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 2003-03-12
PRIOR APPLICATION NUMBER: US 10/800,350
PRIOR FILING DATE: 2004-03-12
NUMBER OF SEQ ID NOS: 425
SECTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 419
LENGTH: 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Sequence 128, Application US/10517696; Publication No. US20060051759A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.2%
Query Match
Best Local Similarity 19.5%
Matches 110; Conservative
                                                                                                                                                                                                                                                                                                                           3.3%
Query Match
Best Local Similarity 32.7%
Matches 50; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Homo sapien
                                                                                                                                                                                                                        TYPE: PRT
COGGANISM: Homo sapiens
US-10-949-720-419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-517-696-128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
US-10-517-696-128
```

a

ò

ò 임 δ 엄

ò

셤

ઠે

용 Š 셤

ò

APPLICATION NUMBER: US/11/193,561

```
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                         284 PARSTISVILGESTISPISSGSMETTALPG------STITPGLS-----EKSIT 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P----NITERVLQGLLRPLFKNTSVGPLYSGCRLTLLRP----EKDGEATGVDAICTHR 127
                                                                                                                                                                                                                                                       62 TTLLPDNTTASGLLEASTPVHSST-----GSPHTTLSPAGSTTRQGESTTFQS-WPNS 113
                                                                                                                                                                                                                                                                                     PDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNG-----PTHRSSVPT---- 177
                                                                                                                                                                                                                                                                                                                                                                                                                                      224 HTISSAPSTTSALVEEPTSYHSSPGSTATTHFPDSSTTSGRSEESTASHSNQDATGTIVL 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    242 ALRSVKN----GAETRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSL 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P----HSSPRSPATTLSPASTTSGVSEESTTSHSRPGSTHTTAPPDSTT--TPGLSRH 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---VGPGLDIQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIV 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----GOESTTFH-- 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SNLDPSLVEQVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFT- 590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                604
                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                          ----YTGCRVI 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YLNGYNEPGPDEPPTTPKPATTFLPPLS-EATTAMGYHLKTLTLNFTISNLQYSPDMGKG 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SATFNSTEGVLQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDP--- 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----SQESTTSHSSPGST 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           472 NWNLSNPDPTSSEYITLLRDIQDKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFS 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----SSP---GSTHTTLPPDSTTSSGIVEASTRVHS-----STGSPRTTLSP--A 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541 SGHSEKSTIFHSSPDASGTTPSSAHSTTSGRGESTTSRISPGSTEITTLPGS--TTTPGL 598
                                                                                                                                                                 17 RSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPGSRK 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---TINYORNKRNIEDALMOLFRNSSIKSYFSDCOVSTFRSVPNRHHTGVDSLCNFSP 659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEASTIPYSSPRSPITILSP----ASMISLGVGEESTISRSQPGSTHSTVSPASTITP 652
                                                                                                                                                                                              -----HSGPGSTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -INLPYSQDKAQPG-
                                                                                                                                     Gaps
                                                                                                                                   Indels 280;
                                                                                                      DB 7; Length 957; 0.29;
                                                                                                                                                                                                                                                                                                                                                ----TSTGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNV--
                                                                                                                                   81; Mismatches 269;
                                                                                                                                                                                  20 QESTASHSSPGSTDTLLSPGSTTASSLGPESTTF--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             419 DTALSPG-------STṛALSF-----
                                                                                                                                                                                                                                                                                                                                                                                                          HLLS------PLFQRSSLGAR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.0%; Score 119; 19.0%; Pred. No. 0
SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 1065
LENGTH: 957
                                                                                                                  al Similarity 19.0
148; Conservative
                                                          ORGANISM: Homo sapiens
US-11-108-172-1065
                                                                                                      Query Match
Best Local S
Matches 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            299
                                                                                                                                                                                                                           7
                                                                                                                                                                                                                                                                                     128
                                                                                                                                                                                                                                                                                                                                                                                                         220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     599
                                                                                                                                                                                                                                                                                                                                              178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          605
                                                                                                                                                                                        셤
                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

```
166 -VNGFTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVM---KHL 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         697 HGORLDISRNTFAEVTGLSPGVTYYFKVFAVSHGRESKPLTAQOTTKLDAPTNLOFVNET 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      446 DSLPINGYA-----PQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQDKVTTLY 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         961 NGQGGNSLEEVVHADQSSCTFDNLSPGLEYNVSVYTVKDDKESVPISDTIIPEV----- 1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -------ENMMPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLT 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    595 SVEGSSTELNLPETANSV------TLSDL-----QPG-VQYNITIYAVEENQES 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  637 TPVVIQQETTGTPRSDTVPSPRDLQFVEVTDVKVTIMMTPPESAVTGYRVDVILPVNLPGE 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      802 NLOPASE----YTVSLVAIKGNOESPKATGVFTT-----LOPGSSIPPYNTEVTETT 849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          586 YLNPIITNLPYSQDKAQPGTTNYQRNKRNI----BDALNQLFRNSSIKS----YFSDCQV 637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     108 LLRPEKDGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLY-- 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | | :: ||
------NVGPSVSKYPLR 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               910 DAPIVNKVVTPLSPPTNLHLEANPDTGVLTVSWERSTTPDITGYRIT------TTPT 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --MDSVLVTVKALFSS 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        445 TTTSTSTPVTSNTVTGETTPFSPLVATSESVTEITASSFVVSWVSASDTVSGFRVEYELS 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSPLFQRSSLG------ARYTGCRVIALRSVKNGAET--RVDLLCTYLQPL 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       950 IVITWTPAPRIGFKLGVRPSQGGEAPREVTSDSGSIVVSGLTPGVEYVYTIQVLRDGQER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               533 NLDPSLVEQVFLDKT-LNASPHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19 SVSTTSTPGTPTVYLGAS-----KTPASIFGPSAASHLLILFTLNFTITNLRYE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EBGDBPQYLDLPSTATSVNIPDLLPGRKYIVNVYQISEDGEQSLILSTS-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SGPGLPI-KQVFHELSQQTHGIT---RLGPYSLDKDSLYLNGYNEPGPDBP-----PT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             374 PLFQKSSMGPFYLGCQLISLRPEKDG-AATGVDTTCTYHPDPVGPGLDIQQLYWELSQLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ------TVL-----DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             297; Gaps.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 2223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
3.0%; Score 118.5; DB 7;
Best Local Similarity 18.9%; Pred. No. 1.2;
Matches 171; Conservative 126; Mismatches 313;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT FILING DATE: 2005-07-29
PRIOR APPLICATION NUMBER: 60/592,823
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR PLING DATE: 2004-07-30
PRIOR PLING DATE: 2004-07-30
PRIOR PLING DATE: 2004-07-30
PRIOR APPLICATION NUMBER: 60/592,804
PRIOR PLING DATE: 2004-07-30
PRIOR PRIOR PRIOR DATE: 2004-07-30
PRIOR PRIOR PRIOR DATE: 2004-07-30
PRIOR PLING DATE: 2004-07-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           433 HGVT----QLGF-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    501 KGSQ-----LHDTFRFCLVTNLT--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-11-193-561-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    554
                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

445 606

373

585

Sequence 2, Application US/11193561
; Publication No. U220660024757A1
; GENERAL INFORMATION:
 APPLICANT: Hussa, Robert
; APPLICANT: Shorter, Simon
; TITLE OF INVENTON: Detection of Oncofetal Fibronectin for Selection of Concepti; FILE REPERENCE: 17101-08000011931

46;

Oy 314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373	Db 910 DAPIUNKVUTPLSPPTMLHLEANPDTGVLTVSWERSTTPDITGYRITTTPT 960 Cy 501 KGSQLHDTRRFCLVTNT	RESULT 12 US-11-193-789-2 US-11-193-789-2 I Gequence 2, Application US/11193789 Publication No. US20060024723A1 GENERAL INFORMATION: APPLICANT: Hussa, Robert APPLICANT: Pisher-Colbris, Mark APPLICANT: Bonoint, Jerome APPLICANT: Shorter, Simon TITLE OF INVENTION: Methods for detecting Oncofetal Fibronectin FILE REFERENCE: 1710-1029001/830 CURRENT PAPLICATION WUMBER: US/11/193,789 CURRENT PELING DATE: 2005-07-29 PRIOR APPLICATION NUMBER: 60/592,803 PRIOR PELING DATE: 2004-07-30 PRIOR PILING DATE: 2004-07-30 PRIOR SEQ ID NOS: 39 SOFTWARE: FasteSEQ for Windows Version 4.0 SEQ ID NO 2 LENGTH: 2223 TYPE: PRT ORGANISM: Homo Sapiens
Db 1070YTVTGLEPG-IDYDISVITLINGGESAPTTLTQQTAVPPTDLRFTNIGP 1118 Qy 638 STFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLNFTLD 689 Db 1119 DTRRVTWAPPPSIDLTNFLVRYSPVRNEEDVAELSISPSDNAVVLTNLLPGTEXVVS 1175 Qy 690 RSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNMHT 741	RESULT 11 US-11-193-711-2 Sequence 2, Application US/11193771 \$ Sequence 2, Application US/11193771 \$ Sequence 2, Application US/11193771 \$ Sequence 2, Application No. US20060024722A1 \$ Fabblication No. US20060024722A1 \$ GENERAL INFORMATION: Samples for Detection of Oncofetal Fibronectin and uses thereof \$ TITLE OF INVENTION: Samples for Detection of Oncofetal Fibronectin and uses thereof \$ TITLE OF INVENTION: Samples for Detection of Oncofetal Fibronectin and uses thereof \$ TITLE OF INVENTION: Samples FOOF-29 \$ CURRENT APPLICATION NUMBER: 60/592,803 \$ PRIOR APPLICATION NUMBER: 60/592,803 \$ PRIOR FILING DATE: 2004-07-30 \$ PRIOR SPELICATION NUMBER: 60/592,804 \$ PRIOR SPELICATION NUMBER: 60/592,	

```
1119 DTMRVTWAPPPSIDLTNFLVRYSPVKNEED---VAELSISPSDNAVVLTNLLPGTEYVVS 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----ROKTGLDSPTGIDFSD--ITANSFTVHWIAPRATIT 1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   802 NLQPASE-----YTVSLVAIKGNQESPKATGVPTT-----LQPGSSIPPYNTEVTETT 849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    741
                                                                                               504
                                                                                                                                                                                              108 LLRPEKDGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLY-- 165
                                                                                                                                                                                                                   313
                                                                                                                                                                                                                                                                                                                                                                                                                   801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DSLFINGYA-----PQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQDKVTTLY 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            533 NLDPSLVEQVFLDKT-LNASFHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHF 585
                                                                                                                                                                                                                                                             -VNGPTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVM---KHL 221
                                                                                                                                                                                                                                                                                                                              -----ARYTGCRVIALRSVKNGAET--RVDLLCTYLQPL 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                             314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PLFQKSSMGPFYLGCQLISLRPEKDG-AATGVDTTCTYHPDPVGPGLDIQQLYWELSQLT 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          850 IVITWTPAPRIGPKLGVRPSQGGRAPREVTSDSGSIVVSGLTPGVEYVYTIQVLRDGQER 909
                                                                                               TITSTSTPVISNIVIGETTPFSPLVATSESVIEITASSFVVSMVSASDIVSGFRVEYELS
                                                                                                                                                    SVEGSSTEINLPETANSV-----TLSDL-----QPG-VQYNITIXAVEENQES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   961 NGQQGNSLEEVVHADQSSCTFDNLSPGLEYNVSVYTVKDDXBSVPISDTIIPEV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---POLTDLSFVDITDSSIGLRWTPLNSS-TIIGYRITVVAAGEGIPIFEDFVDSSVGY-
                                                                                                                               ------ENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLT
                                                                                                                                                                                                                                                                                                                                                            637 TPVVIOOBTTGTPRSDTVPSPRDLQFVEVTDVKVTIMWTPPESAVTGYRVDVIPVNLPGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ------NVGPSVSKYPLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----YVL-----DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             586 YLNFTITNLPYSQDKAQPGTTNYQRNKRNI----EDALNQLFRNSSIKS----YFSDCQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STFRS--VPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQN-----PTLD
                                                              SVSTISTPGTPTVYLGAS-----KTPASIPGPSAASHLLILFTLNFTITNLRYE----
                                                                                                                                                                                                                                                                                                                                                                                              SGPGLPI-KQVFHELSQQTHGIT---RLGPYSLDKDSLYLNGYNEPGPDEP----PT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISBEDLNMH-----T
Query Match 3.0%; Score 118.5; DB 7; Length 2223; Best Local Similarity 18.9%; Pred. No. 1.2; Matches 171; Conservative 126; Mismatches 313; Indels 297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              757 DSTVLVRWTPPRAQIT---GYRL-TVGLTRRGQPRQY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HGVT----QLGF-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1176 VŠŠV----YEQHESTPLRG-
                                                                                                                                                                                                                                                                                                                            LSPLFQRSSLG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |: ||
GYRIRHH 1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           СИНИНИН 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1070
                                                                                                                                                                                                                              554
                                                                                                                                                                                                                                                                                                                              222
                                                                                                                                                                                                                                                                                                                                                                                                                             697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1225
                                                                                                                               68
                                                                                                                                                                                                                                                                                                                                                                                              265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             742
                                                                                      셤
                                                                                                                               8 8
                                                                                                                                                                                    8
                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                     ብ ራ
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        용
```

RESULT 13 US-11-193-806-2 ; Sequence 2, Application US/11193806

```
and Disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 850 IVITWTPAPRIĠFKLGVRPSQGGBAPREVTSDSGSIVVSGLTPGVBÝVYTIQVLRDGQER 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .-----TTPT 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---MDSVLVTVKALFSS 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --------ENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLT 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | | : :: | | : : | | : : | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : | | | : : : | | | : : : | | | : : : | | : : | | : : | | : : | | : : | | | : : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : : | | | : : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : : | | | : : : | | : : | | : : | | : : : | | : : : | | : : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : : | | : | | : | | : | | : : | | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | : | | : | : | | : | : | | : | | : | : | | : | : | | : | : | : | | : | : | | : | : | | : | : | : | | : | : | | :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   637 TPVVIQOETTGTPRSDTVPSPRDLQFVEVTDVKVTIMMTPPESÄVTGYRVDVIPVNLPGE 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DSLPINGYA----PQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLIRDIQDKVTTLY 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLRPEKDGEATGVDAICTHRPDFTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLY-- 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     222 LSPLFQRSSLG------ARYIGCRVIALRSVKNGAET--RVDLLCTYLQPL 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----YVL-----DR 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         697 HGQRLPISRNTFAEVTGLSPGVTYYFKVFAVSHGRESKPLTAQQTTKLDAPTNLQFVNET 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 374 PLFQKSSMGPFYLGCQLISLRPEKDG-AATGVDTTCTYHPDFVGPGLDIQQLYWELSQLT 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19 SVSTTSTPGTPTVYLGAS-----KTPASIFGPSAASHLLILFTLNFTITNLRYE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   166 -VNGFTHRSSVPTTSTGVVSEEPFTLNPTINNLRYMADMGQPGSLKFNITDNVM----KHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          265 SGPGLPI-KQVFHELSQQTHGIT---RLGPYSLDKDSLYLNGYNEPGPDEP-----PT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         505 EEGDEPQYLDLPSTATSVNIPDLLPGRKYIVNVYQISEDGEQSLILSTS----
                                                                                                                                                                                       Marker for Health
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 2223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       910 DAPIVNKVVTPLSPPTNLHLEANPDTGVLTVSWERSTTPDITGYRIT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.0%; Score 118.5; DB 7; llarity 18.9%; Pred. No. 1.2; Conservative 126; Mismatches 313;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DSTVLVRWTPPRAQIT---GYRL-TVGLTRRGQPRQY
                                                                                               APPLICANT: LaPointe, Jerome
APPLICANT: Shorter, Simon
TITLE OF INVENTION: Oncofetal Fibronectin as
FILE REFERENCE: 17101-02801/829
CURRENT APPLICATION NUMBER: US/11/193,806
CURRENT FILING DATE: 2005-07-29
                                                                                                                                                                                                                                                                 CUKKENT FILING DATE: 2005-07-29

PRIOR APPLICATION NUMBER: 60/592,823

PRIOR FILING DATE: 2004-07-30

PRIOR PILING DATE: 2004-07-30

SOFTWARE: PRESEQ FOR Windows Version 4.0

SEQ ID NO 2

LENGTH: 2223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          501 KGSQ-----LHDTFRFCLVTNLT----
APPLICANT: Hussa, Robert
APPLICANT: Fisher-Colbrie, Mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   433 HGVT----QLGF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 171; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , ORGANISM: H
US-11-193-806-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
```

```
Sequence 17, Application US/11193561
Sequence 17, Application US/11193561
GENERAL INFORMATION:
APPLICANT: Hussa, Robert
APPLICANT: Bhorter, Simon
TITLE OF INVENTION: Detection of Oncofetal Fibronectin for Selection of Concepti
FILE REFERENCE: 17101-080001/831
CURRENT FILING DATE: 2005-07-29
PRIOR APPLICATION NUMBER: 60/592,823
PRIOR FILING DATE: 2004-07-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           961 NGQĞGNSLEEVVHADQSSCTFDNLSPGLEYNVSVYTVKDDKESVPISDTIIPEV----- 1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1119 DTWRVTWAPPPSIDLTNFLVRYSPVKNBED---VAELSISPSDNAVVLTNLLPGTEXVVS 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1176 VSSV----YEQHESTPLRG-----RQKTGLDSPTGIDFSD--ITANSFTVHWIAPRATIT 1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISBEDLNMH-----T 741
                                                                                                     969
                                                                                                                                                                                             697 HGQRLPISRNTFABYTGLSPGVTYYFKVFAVSHGRESKPLTAQQTTKLDAPTNLQFVNET 756
                                                                                                                                                                                                                                                               373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----DR 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        850 IVITWTPAPRIGFKLGVRPSQGGEAPREVTSDSGSIVVSGLTPGVEYVYTIQVLRDGQER 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  446 DSLPINGYA-----PONLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQDKVTTLY 500
-- OPG-VQYNITIYAVEENQES 636
                                                                                                                                                                                                                                                                                                                   801
                                                                                                                                                                                                                                                                                                                                                                    374 PLFQKSSMGPFYLGCQLISLRPEKDG-AATGVDTTCTYHPDPVGPGLDIQQLYWELSQLT 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       501 KGSQ-----LHDTFRFCLVTNLT------532
                                                                                  802 NLQPASE----YTVSLVAIKGNOESPKATGVFTT-----LOPGSSIPPYNTEVTETT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           --- ARYTGCRVIALRSVKNGAET -- RVDLLCTYLOPL
                                                                                                                                                      SGPGLPI-KOVFHELSQQTHGIT----RLGPYSLDXDSLYLNGYNEPGPDEP-----PT
                                                                                                                                                                                                                                                               TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                533 NLDPSLVEQVFLDXT-LNASFHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     586 YLNFTITNLPYSQDKAQPGTTNYQRNKRNI----EDALNQLFRNSSIKS----YFSDCQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STERS--VPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQN-----FTLD
  --TLSDL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/592,803
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR PILING DATE: 2004-07-30
PRIOR APPLICATION NUMBER: 60/592,804
PRIOR APPLICATION NUMBER: 60/592,804
PRIOR APPLICATION NUMBER: 60/592,824
PRIOR FILING DATE: 2004-07-30
NUMBER OF SEQ ID NOS: 39
  595 SVEGSSTELNLPETANSV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            433 HGVT----QLGF-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GYRIRHH 1231
                                                         222 LSPLFQRSSLG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              742 GHHHHHH 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-11-193-561-17
                                                                                                                                                            265
                                                                                                                                                                                                                                                                 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                        셤
                                                                                                                                                            ò
                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Husea, Robert
APPLICANT: Husea, Robert
APPLICANT: Hisher-Colbrie, Mark
APPLICANT: Hisher-Colbrie, Mark
APPLICANT: Hisher-Colbrie, Mark
APPLICANT: Hisher-Colbrie, Mark
APPLICANT: LaPointed, Jerome P.
TITLE OF INVENTION: Oncofetal Fibronectin as Marker for Pregnancy-Related Indications
FILE REPRENCE: 17101-026001/827
CURRENT APPLICATION NUMBER: US/11/193,857
CURRENT APPLICATION NUMBER: 60/592,803
PRIOR APPLICATION NUMBER: 60/592,803
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR PILING DATE: 2004-07-30
PRIOR PILING DATE: 2004-07-30
PRIOR PILING DATE: 2004-07-30
PRIOR PILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIO
                                                                                                                   ---PQLTDLSFVDITDSSIGLRMTPLNSS-TIIGYRITVVAAGEGIPIFEDFVDSSVGY- 1069
                                                                                                                                                                                                                           1176 VSSV----YEQHESTPLRG-----RQKTGLDSPTGIDFSD--ITANSFTVHWIAPRATIT 1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ------BNAWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLT 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           108 LLRPEKDGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLY-- 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              166 -VNGFTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVM---KHL 221
                                                                                                                                                                                                                                                                                                STFRS--VPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQN-----FTLD 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19 SVSTTSTPGTPTVYLGAS-----KTPASIFGPSAASHLLILFTLNFTITNLRYE----
                                                                                                                                                                                          586 YLNFIITNLPYSQDKAQPGTTNYQRNKRNI----EDALNQLFRNSSIKS----YFSDCQV
                                                                                                                                                                                                                                                                                                                                                                                                        RSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNMH-----T
                                                                                     533 NLDPSLVEQVFLDKT-LNASFHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHF
        3.0%; Score 118.5; DB 7; Length 2223; Best Local Similarity 18.9%; Pred. No. 1.2; Matches 171; Conservative 126; Mismatches 313; Indels 297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; Sequence 2, Application US/11193857; Publication No. US20060024725A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GYRIRHH 1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                СИННИНН 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-11-193-857-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 554
                                                                                                                                         1015
                                                                                                                                                                                                                                              1070
                                                                                                                                                                                                                                                                                                  638
                                                                                                                                                                                                                                                                                                                                                                                                           690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                              ል ይ
                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                           음 장
                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                  8
```

```
010 DSTVLVRWTPPRAQIT---GYRL-TVGLTRRGOPRÖY------NVGPSVSKYPLR 1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   950 HGQRLPISRNTFAEVTGLSPGVTYYPKVFAVSHGRESKPLTAQQTTKLDAPTNLQFVNET 1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    314 TPKPATTFLPPLSEATTAMGYHLKTLTLNPTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        758 EEGDEPQYLDLPSTATSVNIPDLLPGRKYIVNVYQISEDGEQSLILSTS----- 806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         848 SVEGSSTEINLPETANSV-----TLSDL-----QPG-VQYNITIYAVEENQES 889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        890 TPVVIQQETTGTPRSDTVPSPRDLQFVEVTDVKVTIMMTPPESAVTGYRVDVIPVNLPGE 949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      265 SGPGLPI-KQVFHELSQQTHGIT----RLGPYSLDKDSLYLNGYNEPGPDBP------PT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          108 LLRPEKOGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLY-- 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----QTTAPDA----VYSP 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         222 LSPLFQRSSLG------ARYTGCRVIALRSVKNGAET--RVDLLCTYLQPL 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 374 PLFQKSSMGPFYLGCQLISLRPEKDG-AATGVDTTCTYHPDPVGPGLDIQQLYWELSQLT 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68 -------BIMMPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLT 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                166 -VNGPTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVM---KHL 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19 SVSTTSTPGTPTVYLGAS-----KTPASIFGPSAASHLLILFTLNFTITNLRYE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
3.0%; Score 118.5; DB 7;
Best Local Similarity 18.9%; Pred. No. 1.3;
Matches 171; Conservative 126; Mismatches 313;
                                                                                                                                                               JS-11-193-771-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  807
                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 엽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        品
                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                   46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       950 HGQRLPISRNTFAEVTGLSPGVTYYFKVFAVSHGRESKPLTAQQTTKLDAPTNLQFVNRT 1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1055 NLQPASE----YTVSLVAIKGNQESPKATGVFTT-----LQPGSSIPPYNTEVTETT 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1268 ---PQLTDLSFVDITDSSIGLRWTPLNSS-TIIGYRITVVAAGEGIPIFEDFVDSSVGY- 1322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1010 DSTVLVRWTPPRAQIT---GYRL-TVGLTRRGQPRQY-------NVGPSVSKYPLR 1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .103 IVITWTPAPRIGFKLGVRPSQGGRAPREVTSDSGSIVVSGLTPGVEYVYTIQVLRDGQER 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1214 NĠQĞGNSLEEVVHADQSSCTFDNLSPGLEYNVSVYTVKDDKESVPISDTIIPEV----- 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           372 DIMRVIWAPPPSIDLINFLVRYSPVKNEED---VAELSISPSDNAVVLINLLPGTEYVVS 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1429 VSSV----YEQHESTPLRG-----ROKTGLDSPTGIDFSD--ITANSFTVHWIAPRATIT 1477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LLRPEKDGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLY-- 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                890 TPVVIQOETTGTPRSDTVPSPRDLQFVEVTDVKVTIMWTPPESAVTGYRVDVIPVNLPGE 949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  374 PLFQKSSMGPFYLGCQLISLRPBKDG-AATGVDTTCTYHPDFVGPGLDIQQLYWELSQLT 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   533 NLDPSLVEQVFLDKT-LNASFHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHF 585
                                                                                                                                                                                                                                                                                                                                                                                                                        ------ENMMPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLT 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -VNGFTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNJTDNVM---KHL 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----ARYTGCRVIALRSVKNGAET--RVDLLCTYLOPL 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             446 DSLFINGYA-----PQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQDKVTTLY 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        501 KGSQ-----LHDTFRFCLVTNLT----------MDSVLVTVKALFSS 532
                                                                                                                                                                                                                                                                                                                               67
                                                                                                                                                                                                                                                                                                                                                          TITSTSTPVTSNITVIGETIPPSPLVATSESVIBIIASSFVVSMVSASDIVSGPRVEYELS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----QTTAPDA----PPDPTVDQVDDTSIVVRWSRPQAPIT---GYRI----VYSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGDEPQYLDLPSTATSVNIPDLLPGRKYIVNVYQISEDGEQSLILSTS------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               433 HGVT-----QLGF------DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              586 YLNFTITNLPYSQDKAQPGTTNYQRNKRNI----EDALNQLFRNSSIKS----YFSDCQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         638 STFRS--VPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQN-----FTLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         690 RSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNWH-----T
                                                                                                                                                                                                                                                                                                                             SVSTTSTPGTPTVYLGAS-----KTPASIFGPSAASHLLILFTLNFTITNLRYE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SGPGLPI-KQVPHELSQQTHGIT---RLGPYSLDKDSLYLNGYNEPGPDEP-----PT
                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                 Indels 297;
                                                                                                                                                                                                                                    DB 7; Length 2421
                                                                                                                                                                                                                               Query Match 3.0%; Score 118.5; DB 7; Best Local Similarity 18.9%; Pred. No. 1.3; Matches 171; Conservative 126; Mismatches 313;
                                                                                                                                  ) DATABASE ACCESSION NUMBER: GenBank NM 212475

) DATABASE ENTRY DATE: 2005-06-10

US-11-193-561-17
SOPTWARE: PastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LSPLFQRSSLG----
                                                                                      ORGANISM: Homo Sapiens
PUBLICATION INFORMATION
                   SEQ ID NO 17
LENGTH: 2421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       158
                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                            869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            265
                                                                                                                                                                                                                                                                                                                                                                                                                          68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   166
                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                               ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
```

Indels 297; Gaps Length 2421;

```
APPLICANT: Hickok, Durlin

APPLICANT: Hickok, Durlin

APPLICANT: Hickok, Durlin

APPLICANT: Labolate, Jerome V.

APPLICANT: Japolate, Jerome V.

TITLE OF INVENTION: Samples for Detection of Oncofetal Fibronectin and uses thereof

FILE REFERENCE: 17101-027001/828

CURRENT APPLICATION NUMBER: 2005-07-29

FRIOR APPLICATION NUMBER: 60/592,823

FRIOR APPLICATION NUMBER: 60/592,833

FRIOR FILING DATE: 2004-07-30

FRIOR FILING DATE: 2004-07-30

FRIOR FILING DATE: 2004-07-30

FRIOR FILING DATE: 2004-07-30

FRIOR APPLICATION NUMBER: 60/592,824

FRIOR FILING DATE: 2004-07-30

FRIOR APPLICATION NUMBER: 60/592,824

FRIOR PILING DATE: 2004-07-30

FRIOR APPLICATION NUMBER: 60/592,824

FRIOR PILING DATE: 2004-07-30

FRIOR PILING DATE: 2004-07-30

FRIOR FILING DATE: 2004-07-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Homo Sapiene
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: Genbank NM 212475
DATABASE ENTRY DATE: 2005-06-10
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 17, Application US/11193771
Publication No. US20060024722A1
GENERAL INFORMATION:
                                                                                                         1478 GYRIRHH 1484
742 GHHHHHH 748
```

221

```
950 HGGRLPISRNTFAEVTGLSPGVTYYFKVFAVSHGRESKPLTAQQTTKLDAPTNLQFVNET 1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1055 NLQPASE----YTVSLVAIKGNQESPKATGVFTT-----LOPGSSIPPYNTEVTETT 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1103 IVITWTPAPRIGFKLGVRPSQGGEAPREVTSDSGSIVVSGLTPGVEYVYTIQVLRDGQER 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HGVT-----QLGF-----DR 445
                                                                                                                                                                                                                                                                                                     PLPQKSSMGPFYLGCQLISLRPEKDG-AATGVDTTCTYHPDPVGPGLDIQQLYWELSQLT 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DSLFINGYA-----PONLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQDKVTTLY 500
                                                                                                                                                                                                                                     SVEGSSTELNLPETANSV-----TLSDL-----QPG-VQYNITIXAVEENQES 889
                                                                                                                                             LLRPEKDGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLY-- 165
                                                                                                                                                                                                                                                                                  ---ARYIGCRVIALRSVKNGAET--RVDLLCTYLOPL 264
                                                                            --ENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLT.107
                                 -VNGPTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVM---KHL
                                                                                                                                                                                                                                                                                                                                                     SGPGLPI-KOVFHELSQQTHGIT---RLGPYSLDKDSLYLNGYNEPGPDEP-----PT
            ---KTPASIFGPSAASHLLILFTLNFTITNLRYE----
                                                                                                                                                                                                                                                                                                                                                                                                                  TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                     BEGDEPQYLDLPSTATSVNIPDLLPGRKYIVNVYQISEDGEQSLILSTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/11193806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 17, Application US/111936;
Publication No. US20060024724A1
GENERAL INFORMATION:
APPLICANT: HUSBA. Robert
APPLICANT: Fisher-Colbrie, Mark
             SVSTTSTPGTPTVYLGAS --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GYRIRHH 1484
                                                                                                                                                                                                                                                                                    222 LSPLFQRSSLG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GHITHHIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-11-193-806-17
                                                                                                                                                                                                                                                   848
                                                                                                                 758
                                                                                                                                                 108
                                                                                                                                                                                                                   166
                                                                                                                                                                                                                                                                                                                                                      265
                                                                                                                                                                                                                                                                                                                                                                                                                       314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1478
                                                                                68
                                                                                                                                                                                  807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                        요
                                                                              ò
                                                                                                               셤
                                                                                                                                                 ò
                                                                                                                                                                             a
                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                               용
                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46;
                                                                                                                                                                                                                                                                                                                                                                                               1429 VSSV----YEQHESTPLRG-----ROKTGLDSPTGIDFSD--İTANSFTVHWIAPRATIT 1477
1055 NLQPASE----YTVSLVAIKGNQESPKATGVFTT-----LQPGSSIPPYNTEVTETT 1102
                                                                                                                                                                                                                                                        :|:| | : ::: | | : |::: | : ::: | : ::: | ::: | ::: | ::: | ::: | ::: | ::: | ::: | ::: | ::: | ::: | ::: | ::
                                                                                                 DSLFINGYA-----PQNLSIRGEYQINFHIVNWNLSNPDPTSSBYITLLRDIQDKVTTLY 500
                                                                                                                                                                                                                                      533 NLDPSLVEQVFLDKT-LNASFHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHF 585
                                                                                                                                                                                                                                                                                                       586 YLNFTITULPYSQDKAQPGTTNYQRNKRNI----EDALNQLFRNSSIKS----YFSDCQV 637
                                                                                                                                                                                                                                                                                                                                                                        STFRS--VPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQN-----FTLD 689
                                                                                                                                                                    -MDSVLVTVKALFSS 532
                                                                1103 IVITWTPAPRIGFKLGVRPSQGGEAPREVTSDSGSIVVSGLTPGVEYVYTIQVLRDGQER
                                                                                                                                                                                                   1214 NGQQCNSLBEVVHADQSSCTFDNLSPGLEYNVSVYTVKDDKESVPISDTIIPEV----
                                                                                                                                                                                                                                                                                                                                                                                                                                         RSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNMH-----T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. SABERAL INFORMATION ROBERT

APPLICANT: Hisher-Colbrie, Mark
APPLICANT: Hisher-Colbrie, Mark
APPLICANT: Babointe, Jerome
APPLICANT: Senyel, Jerome
APPLICANT: Senyel, Andrew
APPLICANT: Shorter, Simon
TITLE OF INVENTION: Methods for detecting Oncofetal Fibronectin
FILE REFERENCE: 17101-02901/830
CURRENT APPLICATION NUMBER: US/11/193,789
CURRENT FILING DATE: 2005-07-29
PRIOR PLILING DATE: 2004-07-30
PRIOR PLILING DATE: 2004-07-30
PRIOR PLILING DATE: 2004-07-30
PRIOR PLILING DATE: 2004-07-30
PRIOR PLILING DATE: 2004-07-30
PRIOR PLILING DATE: 2004-07-30
PRIOR PLILING DATE: 2004-07-30
PRIOR PLILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
SOFTWARE: FRACESQ for Windows Version 4.0
SEQ ID NO 17
LENGTH: 2421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels 297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 2421;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
3.0%; Score 118.5; DB 7;
Best Local Similarity 18.9%; Pred. No. 1.3;
Matches 171; Conservative 126; Mismatches 313;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DATABASE ACCESSION NUMBER: GenBank NM 212475
DATABASE ENTRY DATE: 2005-06-10
                                                                                                                                                                    501 KGSQ-----LHDTFRFCLVTNLT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 17, Application US/11193789 Publication No. US20060024723A1 GENERAL INFORMATION:
                                 HGVT-----OLGF---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBLICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GYRIRHH 1484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         СИНИНИН 748
                                                                                                                                    1163
                                                                                                                                                                                                                                                                        1268
                                                                                                                                                                                                                                                                                                                                        1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1478
                                                                                                   446
                                                                                                                                                                                                                                                                                                                                                                          638
                                                                                                                                                                                                                                                                                                                                                                                                                                          690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         742
                                 433
                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                           8 8
                                                                                                                                                                                                                                     6 B 6
                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                         ď
                                                                                            8 8
                               à
```

```
---PQLTDLSFVDITDSSIGLRWTPLNSS-TIIGYRITVVAAGEGIPIFEDFVDSSVGY- 1322
                                                                                                                                                                                                                                                                                                                                                                                                                                                               .214 NGQQGNSLEEVVHADQSSCTFDNLSPGLEYNVSVYTVKDDKESVPISDTIIPEV---- 1267
                                                                                                                                                                                                                                                                                                                                        ---YTVTGL-----EPG-IDYDISVITLINGGESAPTTLTQQTAVPPPTDLRFTNIGP 1371
501 KGSQ-----LHDTFRFCLVTNLT---------MDSVLVTVKALFSS 532
                                                                                                                                         533 NLDPSLVEQVFLDKT-LNASFHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHF 585
                                                                                                                                                                                                                                                                          586 YLNFTITHLPYSQDKAQPGTTHYQRNKRNI----EDALNQLFRNSSIKS----YFSDCQV
                                                                                                                                                                                                                                                                                                                                                                                                                    STFRS--VPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQN----FTLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNMH-----T
```

741

```
PRIOR APPLICATION NUMBER: 60/592,823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 2004-07-30
APPLICATION NUMBER: 60/592,803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 17, Application US/11193857
Publication No. US20060024725A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Publication No. US20060024725A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----- 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                742 GHHHHHH 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-11-193-857-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤.
                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                  ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                       Disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DAPIVNKVVTPLSPFTNLHLEANPDTGVLTVSWERSTTPDITGYRIT------TTPT 1213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     950 HGORLPISRNTFAEVTGLSPGVTYYPKVPAVSHGRESKPLTAQQTTKLDAPTNLQFVNET 1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ------NVGPSVSKYPLR 1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1055 NLOPASE-----YTVSLVAIKGNOESPKATGVFTT-----LQPGSSIPPYNTEVTETT 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1103 IVITWTPAPRIĞFKLGVRPSQGGEAPREVTSDSGSIVVSGLTPGVEYVYTIQVLRDGQER 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                108 LLRPEKDGEATGVDAICTHRPDFTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLY-- 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   848 SVEGSSTELNLPETANSV-----TLSDL-----QPG-VQYNITIYAVEENQES 889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              890 TPVVIQQETTGTPRSDTVPSPRDLQFVEVTDVKVTIMWTPPESAVTGYRVDVIPVNLPGE 949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             265 SGPGLPI-KQVFHELSQQTHGIT---RLGPYSLDKDSLYLNGYNEPGPDEP-----PT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            374 PLFQKSSMGPFYLGCQLISLRPEKDG-AATGVDTTCTYHPDPVGPGLDIQQLYWELSQLT 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DSLFINGYA-----PQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQDKVTTLY 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 598 TTTSTSTPVTSNTVTGETTPPSPLVATSESVTEITASSFVVSWVSASDTVSGFRVEYELS 757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----ERNMPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLT 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               166 -VNGFTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVM---KHL 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      222 LSPLFQRSSLG-------ARYTGCRVIALRSVRNGAET--RVDLLCTYLQPL 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---- MDSVLVTVKALFSS 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ---- YVL-----DR
TITLE OF INVENTION: Obsoletal Pibronectin as a Marker for Health and FILE REPERENCE: 1701-0206tal Pibronectin as a Marker for Health and CURRENT APPLICATION NUMBER: US/11/193,806 CURRENT FILING DATE: 2005-07-29 PRIOR APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATION NUMBER: CONTROL APPLICATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19 SVSTTSTPGTPTVYLGAS-----KTPASIPGPSAASHLLILFTLNFTITNLRYE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 3.0%; Score 118.5; DB 7; Length 2421; Best Local Similarity 18.9%; Pred. No. 1.3; Matches 171; Conservative 126; Mismatches 313; Indels 297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        758 EEGDEPQYLDLPSTATSVNIPDLLPGRKYIVNVYQISEDGEQSLILSTS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBLICATION INFORMĀTION:
DATABASE ACCESSION NUMBER: GenBank NM 212475
DATABASE ENTRY DATE: 2005-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR PILLING DATE: 2004-07-30
PRIOR APPLICATION NUMBER: 60/,592,824
PRIOR PILLING DATE: 2004-07-30
NUMBER OF SEQ ID NOS: 39
SOFTWARE: PastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               433 HGVT----QLGF-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      501 KGSQ-----LHDTFRFCLVTNLT----
                                                                                                                                                                                                                                                                                                                              PRIOR PLING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR APPLICATION NUMBER: 60/592,803
PRIOR APPLICATION NUMBER: 60/592,803
PRIOR APPLICATION NUMBER: 60/592,825
PRIOR PILING DATE: 2004-07-30
PRIOR PILING DATE: 2004-07-30
PRIOR APPLICATION NUMBER: 60/592,804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 17
LENGTH: 2421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-193-806-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
```

```
APPLICANT: Fisher-Colbrie, Mark
APPLICANT: Hickok, Durlin
APPLICANT: Hackok, Durlin
APPLICANT: LaPointed, Jerome P.
TITLE OF INVENTION: Oncofetal Fibronectin as Marker for Pregnancy-Related Indications
FILE REFERENCE: 17101-026001/927
CURRENT APPLICATION NUMBER: US/11/193,857
CURRENT FILING DATE: 2005-07-29
                                                                     533 NLDPSLVEQVFLDKT-LNASFHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHF 585
                                                                                                                                                                                        586 YLNFTITNLPYSQDKAQPGTTNYQRNKRNI----EDALNQLFRNSSIKS----YFSDCQV 637
                                                                                                                  1323 ---YTVTGL-----EPG-IDYDISVITLINGGESAPTTLTQQTAVPPPTDLRFTNIGP 1371
1214 NGQQGNSLBEVVHADQSSCTFDNLSPGLEYNVSVYTVKDDKESVPISDTIIPEV---- 1267
                                                                                                                                                                                                                                                                                                                                                                                                                     1372 DÍMRVIWAPPPSIDLINFLVRÝSPVKNEED---VAELSISPSDNAVVLINLLÞGTEYVVS 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1429 VSSV----YEQHESTPLRG-----ROKTGLDSPTGIDFSD--ITANSFTVHWIAPRATIT 1477
                                                                                                                                                                                                                                                                                                                                                  638 STPRS--VPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQN-----FTLD 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           690 RSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNMH-----T 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   108 LLRPEKOGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLY-- 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----ENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLT 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19 SVSTTSTPGTPTVYLGAS-----KTPASIFGPSAASHLLILFTLNFTITNLRYE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 2421;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         758 EEGDEPQYLDLPSTATSVNIPDLLPGRKYIVNVYQISEDGEQSLILSTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 18.9%; Pred. No. 1.3;
Matches 171; Conservative 126; Mismatches 313;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DATABASE ACCESSION NUMBER: GenBank NM 212475
DATABASE ENTRY DATE: 2005-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 2004-07-30

PRIOR APPLICATION NUMBER: 60/592,825

PRIOR APPLICATION NUMBER: 60/592,825

PRIOR PILING DATE: 2004-07-30

PRIOR PILING DATE: 2004-07-30

PRIOR APPLICATION NUMBER: 60/592,804

PRIOR PILING DATE: 2004-07-30

NUMBER: 0F SEQ ID NOS: 39

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 17

LENGTH: 2421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.0%; Score 118.5;
18.9%; Pred. No. 1.3
```

46;

Gaps

67

806

```
1103 IVITWTPAPRIGFKLGVRPSQGGEAPREVTSDSGSIVVSGLTPGVEYVYTIQVLRDGQER 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DAPIVNKVVTPLSPPTNLHLBANPDTGVLTVSWERSTTPDITGYRIT------TTPT 1213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---PQLTDLSFVDITDSSIGLRWTPLNSS-TIIGYRITVVAAGEGIPIFEDFVDSSVGY- 1322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               950 HGQRLPISRNTFAEVTGLSPGVTYYFKVFAVSHGRESKPLTAQQTTKLDAPTNLQFVNRT 1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TPKPATTFLPPLSEATTAMCYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STERS--VPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQN-----FTLD 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  690 RSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNMH-----T 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  890 TPVVIQQETTGTPRSDTVPSPRDLQFVEVTDVKVTIMMTPPESAVTGYRVDVIPVNLPGE 949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGPGLPI-KQVFHELSQQTHGIT---RLGPYSLDKDSLYLNGYNEPGPDEP-----PT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ------QTTAPDA----PPDPTVDQVDDTSIVVRWSRPQAPIT---GYRI----VYSP 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 222 LSPLFQRSSLG------ARYTGCRVIALRSVKNGAET--RVDLLCTYLQPL 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -VNGFTHRSSVPTTSTGVVSEBPFTLNFTINNLRYMADMGQPGSLKFNITDNVM---KHL 221
                                                                                                                                                                                                                                                                                                                       TITSTSTPVISNIVIGETIPPSPLVAISESVIEITASSFVVSWVSASDIVSGPRVEYELS 757
                                                                                                                                                                                                                                                                                                                                                               --------ENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLT 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              533 NLDPSLVEQVFLDKT-LNASFHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    586 YLNFTITNLPYSQDKAOPGTTNYQRNKRNI----EDALNOLFRNSSIKS----YFSDCQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---YTVTGL-----EPG-IDYDISVITLINGGESAPTTLTQQTAVPPPTDLRFTNIGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DSLFINGYA-----PQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQDKVTTLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          501 KGSQ-----MDSVLVTNLT---------MDSVLVTVKALFSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1214 NGOGGNSLEEVVHADQSSCTFDNLSPGLEYNVSVYTVKDDKESVPISDIIIPEV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     374 PLFQKSSMGPFYLGCQLISLRPBKDG-AATGVDTTCTYHPDPVGPGLDIQQLYWELSQLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           433 HGVT-----YVL-----DR
                                                                                                                                                                                                                                                                                                                                                                                                                                       LLRPBKDGEATGVDAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLY--
                                                                                                                                                                                                                                                                                       19 SVSTTSTPGTPTVYLGAS-----KTPASIFGPSAASHLLILFTLNFTITNLRYE---
                                                                                                                                                                                                                                                     297;
                                                                                                                                                                                                                                                                                                                                                                                               EEGDEPQYLDLPSTATSVNIPDLLPGRKYIVNVYQISEDGEOSLILSTS----
                                                                                                                                                                                                                 Length 2477;
                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                 Query Match
3.0%; Score 118.5; DB 7;
Best Local Similarity 18.9%; Pred. No. 1.4;
Matches 171; Conservative 126; Mismatches 313;
                                                                                        TYPE: PRT
ORGANISM: Homo Sapiens
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: Genbank NM 212482
DATABASE ENTRY DATE: 2005-06-10
PRIOR FILING DATE: 2004-07-30
NUMBER OF SEQ ID NOS: 39
SOFTWARE: PateSEQ for Windows Version 4.0
SEQ ID NO 15
LENGTH: 2477
                                                                                                                                                                               US-11-193-561-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1323
                                                                                                                                                                                                                                                                                                                               869
                                                                                                                                                                                                                                                                                                                                                                                                     158
                                                                                                                                                                                                                                                                                                                                                                                                                                         108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1268
                                                                                                                                                                                                                                                                                                                                                                     68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             名
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Hussa, Robert
APPLICANT: Shorter, Simon
TITLE OF INVENTALION:
FITLE OF INVENTALION: Decection of Oncofetal Pibronectin for Selection of Concepti
FITLE OF INVENTALION: Defection of Oncofetal Pibronectin for Selection of Concepti
FILE REFERENCE: 1710.1-080001/831
CURRENT APPLICATION NUMBER: US/11/193,561
CURRENT APPLICATION NUMBER: 60/592,823
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR FILING DATE: 2004-07-30
PRIOR PRIOR PRIOR NUMBER: 60/592,804
PRIOR PRILING DATE: 2004-07-30
PRIOR PILING DATE: 2004-07-30
PRIOR PILING DATE: 2004-07-30
PRIOR PILING DATE: 2004-07-30
PRIOR PILING DATE: 2004-07-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1372 DIMRVIWAPPPSIDLINFLVRYSPVKNEED---VAELSISPSDNAVVLTNLLPGTEYVVS 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1429 VSSV----YEQHESTPLRG-----RQKTGLDSPTGIDFSD--ITANSFTVHWIAPRATIT 1477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |: :| | : | | | BAPIVNKVVTPLSPPTNLHLBANPDTGVLTVSWERSTTPDITGYRIT------TTPT 1213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1055 NLOPASE----YTVSLVAIKGNQESPKÄTGVFTT-----LQPGSSIPPYNTEVTETT 1102
                                                                                                                                                                                                                                                                                                                                                                                                         1103 IVITWTPAPRIGFKLGVRPSQGGEAPREVTSDSGSIVVSGLTPGVEYVYTIQVLRDGQER 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RSSVLVDGYSPNRNEPLTGNSADIQHSGGRSSLEGPRFEQKLISEEDLNMH-----T 741
                                                                                                                                                                                                                                                                                             PLFQKSSMGPFYLGCQLISLRPEKDG-AATGVDTTCTYHPDPVGPGLDIQQLYWELSQLT 432
                                                                                                                                                                                                                                                                                                                                                                                                                                             DSLFINGYA-----PQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQDKVTTLY 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   533 NLDPSLVEQVFLDKT-LNASFHW--LGSTYQLVDIHVTEMESS----VYQPTSSSSTQHF 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                586 YLNFTITNLPYSQDKAQPGTTNYQRNKRNI----EDALNQLFRNSSIKS----YFSDCQV 637
                          ---ARYTGCRVIALRSVKNGAET--RVDLLCTYLQPL 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -VNGFTHRSSVPTTSTGVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVM---KHL
                                                                                                    314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                     -----TVL-----DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STFRS--VPNRHHTGVDSLCNFSPLARRVDRVAIYEEFLRMTRNGTQLQN-----FTLD
                                                                                                                                                 SGPGLPI-KOVFHELSQQTHGIT---RLGPYSLDKDSLYLNGYNEPGPDEP-----PT
                            |:::|
-----TLSDL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 15, Application US/11193561
Publication No. US20060024757A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                       HGVT-----QLGF------
                            SVEGSSTELNLPETANSV-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GYRIRHH 1484
                                                                           222 LSPLFQRSSLG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    СИНИНИН 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1478
                                           848
                                                                                                                                                   265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    742
                                                                                                                                                                                                                                                                                                                                                                         433
                                                                                                                                                                                                                                                                                                                                                                                                                                              446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                               8 8
                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                       셤
                                                                                                                                                                               윤
                                                                                                                                                                                                                       8
                                   셤
                                                                         ઠે
                                                                                                                                                 ठे
```

1267

532

585

637

432

1429 VSSV----YEQHESTPLRG-----RQKTGLDSPTGIDFSD--ITANSFTVHWIAPRATIT 1477 a & a

742 GHHHHHH 748 |: || 1478 GYRIRHH 1484

Search completed: March 20, 2006, 07:32:41 Job time : 15.0158 secs

THIS PAGE BLANK (USPTO)

595, App 48, Appl 50, Appl 162, App 5, Appli

Sequence Sequence Sequence Sequence Sequence Sequence Sequence

Pred. No. is the score greater than and is derived b

Score

Result No.

3663

Post-processing:

Database

Minimum DB Maximum DB

score:

Sequence:

protein

æ

Run on:

Scoring table:

Searched:

Sequence Sequence Sequence

Sequence Sequence

Sequence Sequence

Sequence Sequence Sequence Sequence

Sequence

Sequence Sequence Sequence

Sequence

Sequence Sequence Sequence

sequence

```
361
                                                                                                                721
                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
8
                         셤
                                                        ò
                                                                                 g
                                                                                                                à
                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TSSEYITLIRDIQDKYTTIXKGSQLHDTFRFCLVTNLTWDSVLVTVKALFSSNLDFSLVE 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDK 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 ITNLRYEENWWPGSRKPNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 GVVSEEPFILNFIINNIRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRV 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 IALRSVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYL 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 NGYNEPGEDEPFITPKPATTFLPPLSEATTAMGYHLKTUTLNFTISNLQYSPDMGKGSAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRV 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IALRSVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYL 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NGYNEPGPDEPPTTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSAT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FNSTEGVLQHLLRPLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLD 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 IQQLYWELSQLTHGVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDP 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AQQPARRARRIKLFTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTINFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DAICTHRPDPTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 AAQPARRARRIKLFTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                             APPLICANT: Albone, Earl F.
APPLICANT: Soltis, Daniel A.
TILLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
TITLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
TITLE OF INVENTION: CA 125/0772P AND METHODS OF USE THEREOF
FILE REFERENCE: 6750-214-999
CURRENT APPLICATION NUMBER: US/10/687,035
CURRENT FILING DATE: 2003-10-15
PRIOR APPLICATION NUMBER: 60/418,986
PRIOR APPLICATION NUMBER: 60/418,986
PRIOR APPLICATION NUMBER: 60/418,928
PRIOR FILING DATE: 2003-10-12
NUMBER OF SEQ ID NOS: 71
SOFTWARE: FASESEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 748
                                                                                                                                                                                                                                                                                                                                                                                                                    Length 748;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 3945; DB 5;
100.0%; Pred. No. 3.1e-312;
iive 0; Mismatches 0;
     ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: CA 125/0772P 3-repeat
                                                                        ; Sequence 1, Application US/10687035; Publication No. US20050064518A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 100.
Matches 748; Conservative
                                                                                                                                                                                                                                                                                                                                                                                           US-10-687-035-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          장염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
```

```
120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                        IALRSVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYL 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99
                                                                                                                                            661 ARRVDRVAIYEEFLRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNSADIQHSGGRS 720
                                                                                               601 AOPGITINYORNKRNIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPL 660
541 QVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDK 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 ITNLRYBENMWPGSRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 IALRSVKNGAETRVDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 NGYNEPGPDEPPTTPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 AAQPARRARRIKLFTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DAICTHRPDFTGPGLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GVVSEEPFTLNFTINNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FNSTEGVLQHLIRPLFQKSSMGPFYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLD
                                                  601 AQPGTINYQRNKRNIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 AAQPARRARRIKLFIHRSSVSTISTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JUNEARLY ALDONE, BAIL F.

JAPPLICANT: Albone, Bail F.

APPLICANT: Soltis, Daniel A.

JITIE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED

TITIE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED

TITIE OF INVENTION: CA. 125/0712P AND METHODS OF USE THEREOF

FILE REFERENCE: 6750-214-999

CURRENT APPLICATION NUMBER: 00/485,986

PRIOR APPLICATION NUMBER: 60/485,986

PRIOR APPLICATION NUMBER: 60/486,986

PRIOR APPLICATION NUMBER: 60/418,828

PRIOR RELING DATE: 2003-10-12

NUMBER OF SEQ ID NOS: 71

SOFTWARE: FASTESEQ for Windows Version 4.0

IENGTH: 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 5; Length 809;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match 99.0%; Score 3904.5; DB Best Local Similarity 92.5%; Pred. No. 7e-309; Matches 748; Conservative 0; Mismatches (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: CA 125/0772P 3-repeat'TM
US-10-687-035-2
                                                                                                                                                                                                                                              748
                                                                                                                                                                                                                                                                       SLEGPRFEQKLISEEDLNWHTGHHHHHH 748
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/10687035; Publication No. US20050064518A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Artificial Sequence
```

셤 ò 셤

ठ

ò

g

ò

요

ò

쉽

ሯ

ò

```
420 INNLRYMADMGQPGSLKFNITDNVMQHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 6479
                                                                                                                                                                         5480 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 6539
                                                                                                                                                                                                                                                                                                                                                               5600 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 6659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            840 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 6899
                                                                                                                                                                                                                                                             9:660 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 6719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6720 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 6779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5780 WLGSTYQLVDIHVTEMESSVYQPISSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 6839
  3360 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 6419
                                                                                                                                            313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        494 DKVTILYKGSQLADTRRFCLVTNLTMDSVLVTVKALPSSNLDPSLVBQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                       314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                               374 PLFOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                             GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENNMPG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74 SRKFNTTERVLØGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73
                                                                                                                                         254 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THE THERAPY AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                 194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6900 LEMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 6936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Algate, Paul A.
APPLICANT: Algate, Paul A.
APPLICANT: Algate, Darrick
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER
FILE REFERENCE: 210121.46207
CURRENT APPLICATION WUMBER: US/09/884,441
CURRENT APPLICATION WUMBER: 2001-06-18
NUMBER OF SEQ ID NOS: 489
SOFTWARE: PSECSEQ for Windows Version 3.0
SEQ ID NO 389
LENGTH: 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 3663; DB 3;
Pred. No. 3.6e-289;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 389, Application US/09884441 Patent No. US20020119158A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 92.9
Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-884-441-389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-884-441-389
                                                                                                                                                                                                                                                                                                                                                                                                                             434 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134
                                                                                        셤
                                                                                                                                    8
                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                            ઠે
                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: DOTOILING, SVELIAND U.
APPLICANT: Folic Brian E.
APPLICANT: Senetr, Peter D.
APPLICANT: Senetr, Peter D.
APPLICANT: Senetr, Peter D.
APPLICANT: Bene, Allen J.
APPLICANT: Spencer, Susan D.
APPLICANT: ONNOMER: US/10/983,340
CURRENT FILING DATE: 2004-11-05
PRIOR APPLICATION NUMBER: US 60/598,899
PRIOR APPLICATION NUMBER: US 60/57,116
PRIOR APPLICATION NUMBER: US 60/557,116
PRIOR PILING DATE: 2004-03-26
PRIOR PILING DATE: 2003-11-06
PRIOR PLING DATE: 2003-11-06
PRIOR PLING DATE: 2003-11-06
PRIOR PLING DATE: 2003-11-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG 6299
                                                                                                                                         540
                                                                                                                                                                                        9
                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                         ARRVDRVAIYEEFLRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNSDLPFWAVILI 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74 SRKFNTTERVLQGLLRPLPKNTSVGPLYSGCRLTLLRPBKDGRATGVDAICTHRPDPTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73
                                                                                                                                                                                   QVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDK
                                                                                                                             TSSEYITLLRDIQDKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVB
                                                                                                                                                                                                              QVFLDKTLNASFHWLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDK
                                                                                                                                                                                                                                                                                                                 AQPGTTNYQRNKRNIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHTGVDSLCNFSPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721 GLAGLIGLITCLICGVLVTTRRRKKEGEYNVQQQCPGYYQSHLDLEDLQNSADIQHSGGR
                                                                                                                                                                                                                                                                                 AQPGTTNYQRNKRNIEDALNQLPRNSSIKSYPSDCQVSTFRSVPNRHHTGVDSLCNFSPL
                                                                                                                                                                                                                                                                                                                                                                              ARRVDRVAIYEEFLRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14 PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 6995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 3665; DB 5;
Pred. No. 6.8e-288;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781 SSLEGPRFEOKLISEEDLNMHTGHHHHH 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/10983340 Publication No. US20050238649A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Doronina, Svetlana O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92.94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-983-340-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6240
                                            421
                                                                                                                                    481
                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                        199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720
121
                                                                                           481
                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
```

셤 Š 셤 ò

유

ठे

8 8

g ò 염장

8

```
TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIEDALNOLFRNSSIKSYFSDCOVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                         198 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                            318 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DKVTILYKGSQLHDTERFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVPLDKTLMASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                   GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                        INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                          VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                             GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THE THERAPY AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 833;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LEMTENGTQLQNFTLDRSSVLVDGYFPNRNEPLTGNS 774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Retter, Marc W.
APPLICANT: Fanger, Gary R.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER; FILE REPERRING: 210121.462C6
CURRENT APPLICATION NUMBER: US/09/827,271
CURRENT FILING DATE: 2001-04-04
NUMBER OF SEQ ID NOS: 461
SOFTWARE FastSEQ for Windows Version 3.0
SEQ ID NO 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 3663; DB 3;
Pred. No. 3.6e-289;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 389, Application US/09827271; Publication No. US20030165504A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Homo sapiens
US-09-827-271-389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-827-271-389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   618
                      78
                                                                                                                                                                                           194
                                                                                                                                                                                                                            258
                                                                                                                                                                                                                                                            254
                                                                                                                                                                                                                                                                                                                             314
                                                                                                                                                                                                                                                                                                                                                            378
                                                                                                                                                                                                                                                                                                                                                                                              374
                                                                                                                                                                                                                                                                                                                                                                                                                             438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     738
                                                    74
                                                                                                                        134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                    ठे
                                                                                    a
                                                                                                                        8
                                                                                                                                                 셤
                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                             437
                                                                                                                                                                                                                                              433
                                                                                                                                                                                                                                                                                                                                                                                                   DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WLGSTYQLVDIHVTEMESSVYQPTSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     377
                                                                                                                                                                                                                                                                 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                               NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                           TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
       GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 257
                                                           VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                               TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                        INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                         VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                            PLFOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 389, Application US/09907969
Publication No. US20030091580A1
GENERAL INFORMATION, Jennifer L.
APPLICANT: King, Gordon E.
APPLICANT: Algate, Paul A.
APPLICANT: Reder, Paul A.
APPLICANT: Reder, Geven P.
APPLICANT: Reder, Thomas S.
APPLICANT: Reder, Darrick
APPLICANT: Reder, Darrick
APPLICANT: Carter, Darrick
APPLICANT: Octorer, Darrick
APPLICANT: Octorer, Darrick
APPLICANT: Albone, Earl
TITLE OF INVENTION: Compositions NUD METHODS FOR THE THEN
TITLE OF INVENTION: Compositions NUD DIAGNOSIS OF OVARIAN CANCER
FILE REFERENCE: 210121.46208
CURRENT FILING DATE: 2001.07-17
NUMBER OF SEQ ID NOS: 596
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 92.9%; Score 3663; DB 3; Best Local Similarity 99.9%; Pred. No. 3.6e-289; Matches 696; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Homo sapiens
US-09-907-969-389
                                      194
                                                                         258
                                                                                                          254
                                                                                                                                          318
                                                                                                                                                                                                             378
                                                                                                                                                                                                                                              374
                                                                                                                                                                                                                                                                             438
                                                                                                                                                                                                                                                                                                                                                498
                                                                                                                                                                                                                                                                                                                                                                                                               558
                                                                                                                                                                                                                                                                                                                                                                                                                                                  554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      674
                                                                                                                                                                           314
                                                                                                                                                                                                                                                                                                               434
                                                                                                                                                                                                                                                                                                                                                                                 494
```

497

493 557 553 617 613

437 433

g 8 6 ò

8 B

g

ઠે 8

253 317 313 377

193 257 ö

8

14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENWWPG 73

```
258 INNIRYWADMGQPGSLKFNITDNVMGHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 317
                                                                                                                                                                                                                                                                                                                  VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNBPGPDBPPT 313
                                                                                                                                                                                                                                                                                                                                     VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 377
                                                                                                                                                                                                                                                                                                                                                                                         314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                  498 GVTOLGFYVLDRDSLFINGYAPONLSIRGEYOINFHIVNWALSNPDPTSSEYITLLRDIG 557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                138 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGBATGVDAICTHRPDPTGP 197
                                                                                                                                                                 134 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                      198 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 374 PLFOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      438 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFITINLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         618 WIGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 677
                                                         FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILPTLNFTITNLRYEENMWPG 137
                                                                                             SRKFNTTERVLOGILRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDFTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                   STPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPG 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIEDALMOLFRNSSIKSYFSDCOVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                            INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92.9%; Score 3663; DB 5; Length 833;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 389, Application US/10860790
; Publication No. US20050031634A1
; GENERAL INFORMATION.
; APPLICANT: Bangur, Chaitanya S.
; APPLICANT: Retter, Marc W.
; APPLICANT: Retter, Gary R.
; APPLICANT: RANGER, Gary R.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THEF;
; TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER;
; FILE REFERENCE: 210121.462C11
; CURRENT FILING DATE: 2004-06-02
; NUMBER OF SEQ ID NOS: 624
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 389
; LENGTH B33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Homo sapiens
US-10-860-790-389
                                                         78
                                                                                         74
                                                                                                                                                                                                                                            194
                                                                                                                                                                                                                                                                                                                  254
                                                                                                                                                                                                                                                                                                                                                      318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               614
                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                 셤
                                                                                             ò
                                                                                                                      요
                                                                                                                                                                 ઠે
                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                            VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                           PLPOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    613
133
                                                                              SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDFTGF 197
                                                                                                                                                                 257
                                                                                                                                                                                                        253
                                                                                                                                                                                                                                            317
                                                                                                                                                                                                                                                                                                   318 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKOSLYLNGYNBPGPDBPPT 377
                                                                                                                                                                                                                                                                                                                                                     TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                          TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIOOLYWELSQLTH 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GVTQLGFYVLDRDSLPINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIEDALMOLFRNSSIKSYFSDCQVSTFRSVPNRHTTGVDSLCNFSPLARRVDRVAIYEEF 737
                                                                                                                               GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                INNLRYMADMGQPGSLKKNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DKVTTLYKGSQLHDTFRFCLVTNLIMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WIGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                         SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGBATGVDAICTHRPDPTGP
                                                                                                                                                  GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPPTLNFT
                                                                                                                                                                                                        INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVBQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIBDALNOLPRNSSIKSYPSDCQVSTPRSVPNRHHTGVDSLCNPSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 389, Application US/10198053
; PUblication NO. US20030124140A1
; GENERAL INFORMATION.
; APPLICANT: Bangur. Chaitanya S.
; APPLICANT: Retter, Marc W.
; APPLICANT: Retter, Marc W.
; APPLICANT: Retter, Marc W.
; APPLICANT: Panger, Gary R.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
; TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
; FILE REFERENCE: 210121.462C9
; CURRENT APPLICATION NUMBER: US/10/198,053
; CURRENT PILING DATE: 2002.07-17
; NUMBER OF SEQ ID NOS: 624
; SOFTWARE: PastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNBPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LEMTRNGTQLQNFTLDRSSVLVDGYFPNRNEPLTGNS 774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 3663; DB 4;
Pred. No. 3.6e-289;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92.9%;
99.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 99.5
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
CRGANISM: Homo sapiens
US-10-198-053-389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
US-10-198-053-389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 389
LENGTH: 833
                                                                                                                                                                                                                                                                                                                                                                                     378
                                                                                                                                                                                                                                          258
                      78
                                                         74
                                                                                           138
                                                                                                                             134
                                                                                                                                                                 198
                                                                                                                                                                                                        194
                                                                                                                                                                                                                                                                              254
                                                                                                                                                                                                                                                                                                                                                      314
                                                                                                                                                                                                                                                                                                                                                                                                                             374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     434
                    8
                                                                                                                                                          g
                                                                                                                                                                                                      8 6
                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                     ઠ
                                                                                중 음
                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
```

673

```
sapien
              ; ORGANISM: Homo
US-09-778-320-206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-910-689-206
                                                                                                                                                                    159
                                                                                                                                                                                                    74
                                                                                                                                                                                                                                      219
                                                                                                                                                                                                                                                                          134
                                                                                                                                                                                                                                                                                                         279
                                                                                                                                                                                                                                                                                                                                           194
                                                                                                                                                                                                                                                                                                                                                                             339
                                                                                                                                                                                                                                                                                                                                                                                                             254
                                                                                                                                                                                                                                                                                                                                                                                                                                               399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                               용
                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                  8 &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                    VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         137
                                                                                                                                                                                                                                                                            INNLRYMADMGQPGSLKFNITDNVMKHLLSPLPQRSSLGARYTGCRVIALRSVKNGAETR 317
                                                                                                                                                                                                                                                                                                                                                                                                                  TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                    SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 133
                                                                                                                                      253
                                                                                                                                                                                                                                                                                                                                                                                               TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                  73
                                                                     FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENWWPG
                                                FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                          INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 206, Application US/09778320
| Sequence 206, Application US/09778320
| Patent No. US20010034052A1
| GENERAL INFORMATION:
| APPLICANT: Dillon, Davin C. | APPLICANT: Dillon, Davin C. | APPLICANT: Dillon, Davin C. | APPLICANT: Houghton, Raymond L. | APPLICANT: Mitcham, Jennifer | APPLICANT: Mitcham, Jennifer | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Mang, Tongrong | APPLICANT: Faatseg for Windows Version 3.0 | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT: Page | APPLICANT
                 ö
                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LRWTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                 ;
Pred. No. 3.6e-289;
0; Mismatches 1;
                 ;
186.66
                 696; Conservative
   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    738
                                                                                                                                                                                                                                                                                                                                                              318
                                                                                                                                                                                                                                                                                                                                                                                                                                 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   674
                                                                                                                      74
                                                                                                                                                      138
                                                                                                                                                                                        134
                                                                                                                                                                                                                        198
                                                                                                                                                                                                                                                          194
                                                                                                                                                                                                                                                                                            258
                                                                                                                                                                                                                                                                                                                              254
                                                                                                                                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         498
   Best Local
                Matches
                                                                                                                                                                                                                                                          8 6 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                        පි ජි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        දි සි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     रुं है ह
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                            ద
                                                                                                                  8
                                                                                                                                           යි පි
                                                                                                                                                                                                                 g
```

```
818
                                                                                                                                                                                                                                                                                                                                          518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              673
                                                                                                                                    133
                                                                                                                                                                      278
                                                                                                                                                                                                        193
                                                                                                                                                                                                                                          338
                                                                                                                                                                                                                                                                                          553
                                                                                                                                                                                                                                                                          253
                                                                                                                                                                                                                                                                                                                                                                                                              TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                  73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                     TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEBNWWPG
                                                                                                                                    SRKFNTTERVLOGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDALCTHRPDPTGP
                                                                                                                                                                                                        GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                        GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                   PTHRSSVSTTSTPGTPTVYLGASKTPASIPGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                           SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDALCTHRPDPTGP
                                                                                                                                                                                                                                                                          INNIRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND
                                   Indels
Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 206, Application US/09910689
Patent No. US20020081609A1
GENERAL INFORMATION:
APPLICANT: Dillon, Davin C.
APPLICANT: Jiang, Yuqiu
APPLICANT: Jiang, Yuqiu
APPLICANT: Houghton, Raymond L.
APPLICANT: Wang, Tongtong
APPLICANT: Ward, Tongtong
APPLICANT: Marlocker, Susan L.
APPLICANT: Marlocker, Susan L.
APPLICANT: MARJON: COMPOSITIONS
TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER
FILE REFERENCE: 210121.491C6
Score 3663; DB 3;
Pred. No. 4.2e-289;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  674 LRWITRIGTOLONFILDRSSVLVDGYSPNRNEPLIGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92.9%;
nilarity 99.9%;
Conservative 0
   Query Match
Best Local Similarity
Matches 696; Conserv
```

ö

218 133 278 193

셤

셤

ઠે

ò

셤

ઠે

셤

ሯ

73

398 253

313 458 518

433 578 493 638

698 613 758 673 818

553

```
279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           579 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                 159 PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 399 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 459 TPKPATTFLPPLSEATTAMGYHLKTLTLNPTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              639 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYBENMWPG
                                                                                                                                                                                                                                                                                                                                                                                            74 SRKFNTTERVLOGILRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDFTGP
                                                                                                                                                                                                                                                                                                                                                                                                                    219 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPBKDGRATGVDAICTHRPDFTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLDRRQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSBEPPTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   194 INNLRYMADMGQPGSLKFNITDNVWKHLLSPLFQRSSLGARYTGCRVIALRSVKNGABTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              339 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGABTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VDLLCTYLQPLSGPGLP1KQVFHELSQQTHG1TRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              374 PLPQKSSMGPPYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      519 PLFQXSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   434 GVTQLGFYVLDRDSLPINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   759 NIEDALNOLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 478, Application US/09884441

Sequence 478, Application US/09884441

GENERAL INFORMATION:
APPLICANT: APPLICANT: Carter, Darrick
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: LOAGNOSIS OF OVARIAN CANCER
FILE REFERENCE: 210121.462C7
                                                                                                                                                                                                                    Length 914;
                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                710
                                                                                                                                                                                                                  Score 3663; DB 3;
Pred. No. 4.2e-289;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LEMIENGTQLQNFTLDRSSVLVDGYFPNRNEPLTGNS
  CURRENT APPLICATION NUMBER: US/09/884,441.
CURRENT FILING DATE: 2001-06-18
NUMBER OF SEQ ID NOS: 489
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 312
LENGTH: 914
                                                                                                                                                                                                                    92.94;
                                                                                                                                                                                                                  Query Match
Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                 ; TYPE: PRT
; ORGANISM: Homo sapien
US-09-884-441-312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-884-441-478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          819
                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                               218
                                                                                                                                                                                                                                                                                                                                                                                                                                      278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PLFQKSSMGPFYLGCQLISLRPEXDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INNLRYMADMGQPGSLKFNITDNVMKHLLSPLPQRSSLGARYTGCRVIALRSVKNGAETR 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PLFOKSSMGPPYLGCOLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GVTQLGFYVLDRDSLPINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WIGSTYQLVDIHVTEMESSVYQPISSSSTQHFYLNFIITNLPYSQDKAQPGTTNYQRNKR 758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             673
                                                                                                                                                                                                                                                                                                       73
                                                                                                                                                                                                                                                                                                                                                                                                                  SRKFNITERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDALCTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VDLLCTYLQPLSGPGLPI KQVFHBLSQQTHGI TRLGPYSLDKOSLYLNGYNBPGPDBPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                    PTHRSSVSTTSTPGTPTVYLGASKTPASI PGPSAASHLLI LPTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                       PTHRSSVSTTSTPGTPTVYLGASKTPASI FGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                            SRKFNTTERVLOGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGBATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TPKPATTFLPPLSEATTAMGYHLKTLTLNPTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THE THERAPY AND
                                                                                                                                                                                                                    Length 914;
                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            855
                                                                                                                                                                                                                  Score 3663; DB 3;
Pred. No. 4.2e-289;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Algate, Paul A.
APPLICANT: Carter, Darrick
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER
FILE REFERENCE: 210121.462C7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
CURRENT APPLICATION NUMBER: US/09/910,689
CURRENT FILING DATE: 2001-07-20
NUMBER OF SEQ ID NOS: 307
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 206
LENGTH: 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 312, Application US/0988441
Patent No. US20020119158A1
GENERAL INFORMATION:
                                                                                                                                                                                                                  Query Match
Best Local Similarity 99.9%;
Matches 696; Conservative
                                                                                                                               TYPE: PRT
ORGANISM: Homo sapiens
US-09-910-689-206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
US-09-884-441-312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   669
                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                         74
                                                                                                                                                                                                                                                                                                                                                                                                                                    219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     759
                                                                                                                                                                                                                                                                                                                                               159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        819
```

셤

ሯ 셤 a

Š 셤 ઠે

ઠે

셤

셤 ò

ò

셤 δ

ò

```
219
                                                                                                                                                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                          159
                                                                                                                                                                                                                                                                                                 134
                                                                                                                                                                                                                                                                                                                                       194
                                                                                                                                                                                                                                                                                                                                                                          254
                                                                                                                                                                                                                                                                                                                                                                                             399
                                                                                                                                                                                                                                                                                                                                                                                                                                459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                        ď
                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                    GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSERPFTLNFT 338
                                                                                                                                                                                                                                                    253
                                                                                                                                                                                                                                                              458
                                                                                                                                                                                                                                                                                                                                                518
                                                                                                                                                                                                                                                                                                                                                                 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGFGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                PLFQKSSMGPFYLGCQLISIRPEKDGAATGVDTTCTYHPDPVGFGLDIQQLYWELSQLTH 578
                                                                                                                                                                                                                                                                                                                                                                                                      GUTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                                                               GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                         VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                             TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                           DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                         TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNIQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                   VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                          SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                    INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                   Gaps
                                                                                                                   ö
                                                                                                                  1; Indels
                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                Score 3663; DB 3;
Pred. No. 4.2e-289;
0; Mismatches 1;
CURRENT APPLICATION NUMBER: US/09/884,441 CURRENT FILING DATE: 2001-06-18 NUMBER OF SEQ ID NOS: 489 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 478 LENGTH: 914
                                                                                                Query Match
Best Local Similarity 99.9%;
Matches 696; Conservative
                                                            ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-884-441-478
                                                                                                                                                                                                                                                                                         254
                                                                                                                                                                                                                                                                                                            399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            674
                                                                                                                                                                                             219
                                                                                                                                                                                                                                                     194
                                                                                                                                                                                                                                                                                                                               314
                                                                                                                                                                                                                                                                                                                                                                                     519
                                                                                                                                                                                                                                                                                                                                                                                                                                                              639
                                                                                                                                                                           74
                                                                                                                                                                                                               134
                                                                                                                                                                                                                                  279
                                                                                                                                                                                                                                                                                                                                                 459
                                                                                                                                                                                                                                                                                                                                                                  374
                                                                                                                                                                                                                                                                                                                                                                                                        434
                                                                                                                                                                                                                                                                                                                                                                                                                         579
                                                                                                                                                                                                                                                                                                                                                                                                                                            494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 554
                                                                                                                                                                                                                                                                                                                                                                                요 수 명
                                                                                                                                                                                                                                                                                                                                                                                                                                     8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 6
                                                                                                                                                   셤
                                                                                                                                                                                      8 8 8
                                                                                                                                                                                                                                                   8 8 8
                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 8
                                                                                                                                                                         ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TPKPATTFLPPLSEATTAMGYHLKTLTLAFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVTQLGPYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            553
                                                                                                                                                                                                                                                                                                                                                                                                                                                            218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                            73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       699 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIEDALNOLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                                                                                                                                                                                                                                                                         279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               339 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVRNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                     Length 914;
                                                                                                                                                                                                                                                                                                                                                                                       Indels
APPLICANT: Fanger, Gary Richard
APPLICANT: Reed, Steven G.
APPLICANT: Vedvick, Thomas S.
APPLICANT: Carter, Darrick
APPLICANT: Hill, Paul
APPLICANT: Hill, Paul
TITLEOF INVENTION: COMPOSITIONS AND METHODS FOR THE THE;
TITLE OF INVENTION: COMPOSITIONS OF OVARIAN CANCER
TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
FILE REFERENCE: 210121.462C8
CURRENT APPLICATION NUMBER: US/09/907,969
CURRENT FILING DATE: 2001-07-17
NUMBER OF SEQ ID NOS: 596
SOFTWARE FALSERO FOR WINGOWS VERSION 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LEMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                 Query Match
92.9%; Score 3663; DB 3;
Best Local Similarity 99.9%; Pred. No. 4.2e-289;
Matches 696; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LEMTRIGITOLONFTLDRSSVLVDGYFPRRNEPLIGNS
                                                                                                                                                                                                                                                                              TYPE: PRT
CRGANISM: Homo sapiens
US-09-907-969-312
                                                                                                                                                                                                                                            SEQ ID NO 312
LENGTH: 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
```

RESULT 1

Sequence 312, Application US/09907969; Publication No. US20030091580A1; GENERAL INFORMATION: APPLICANT: Mitcham, Jennifer L. APPLICANT: King, Gordon E. APPLICANT: Algate, Paul A. APPLICANT: Pling, Steven P. APPLICANT: Retter, Marc W.

RESULT 13 US-09-907-969-312

```
614 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         494 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTINLRYBENNWPG 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74 SRKFNTTERVLØGLLRPLFKNTSVGPLYSGCRLTLLRPBKDGEATGVDAICTHRPDPTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               219 SRKFNTTERVLQGLLRPLFRONTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 339 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    399 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             459 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               374 PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         639 DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH 698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   699 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR 758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        254 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    314 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           434 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           579 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           519 PLFQKSSMGPPYLGCQLISLRPBKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                 THE THERAPY AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 92.9%; Score 3663; DB 3; Length 914; Best Local Similarity 99.9%; Pred. No. 4.2e-289; Matches 696; Conservative 0; Mismatches 1; Indels (
                                                                       710
                                                                                                                                                                                                                         ; Sequence 312, Application US/09827271
; Publication No. US20030165504A1
; GENERAL INFORMATION:
    APPLICANT: Retter, Marc W.
    APPLICANT: Retter, Marc W.
    TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
    TITLE OF INVENTION: DIAGNOSIS OF OVARIAN CANCER
    FILE REPRENCE: 210121.46226
    CURRENT APPLICATION NUMBER: US/09/827,271
    CURRENT PILING DATE: 2001-04-04
    NUMBER OF SEQ ID NOS: 461
    SEQ ID NO 312
    LENGTH: 914
                                                                                                     674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , ORGANISM: Homo sapien US-09-827-271-312
                                                                                                                                                                                           RESULT 15
US-09-827-271-312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                             g
                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    399 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLPQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       614 NIEDALNOLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GVTQLGPYVLDRDSLPINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDPTSSEYITLLRDIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PLFQKSSMGFY1GCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DKVTTLYKGSQLHDTPRPCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVPLDKTLNASFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     899 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SRKFNTTERVLOGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               219 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGRATGVDAICTHRPDFTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEBPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              279 GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFILNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VDLLCTYLQPLSGPGLP1KQVFHELSQQTHG1TRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92.9%; Score 3663; DB 3; Length 914; 99.9%; Pred. No. 4.2e-289; Live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                               METHODS FOR THE THERAPY OVARIAN CANCER
                                                                                                                                                                                                                                                                                                             APPLICANT: Albone, Earl
ITILE OF INVENTION: COMPOSITIONS AND METHODS;
TITLE OF INVENTION: COMPOSITIONS OF OVARIA;
FILE REFERENCE: 210121.462C8
CURRENT APPLICATION NUMBER: US/09/907,969;
CURRENT FILING DATE: 2001-07-17
NUMBER OF SEQ ID NOS: 596;
SOFTWARE: FastSEQ for Windows Version 4.0;
SEQ ID NO 478
                        Sequence 478, Application US/09907969 Publication No. US20030091580A1 GENERAL INFORMATION:
                                                                                      APPLICANT: Mitcham, Jennifer L.
APPLICANT: King, Gordon E.
APPLICANT: Algate, Paul A.
APPLICANT: Fling, Steven P.
APPLICANT: Retter, Marc W.
APPLICANT: Reed, Steven G.
APPLICANT: Reed, Steven G.
APPLICANT: Vedvick, Thomas S.
APPLICANT: Vadvick, Thomas S.
APPLICANT: Hill, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-907-969-478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            579
```

ઠ

ò g g

ò

셤

δ

ద

δ

셤

셤 ò

ò

윱

8

셤

ሯ

ò

è

553

```
434 GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNMNLSNPDPTSSEYITLLRDIQ 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLDREQLYLELSQLTHSITELGPYTLDRDSLYNNGFTHRSSVPTTSTGVVSEEPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLFOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGFGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSERPFTLNFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    194 INNLRYMADMGQPGSLKFNITDNVWKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                   #IGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                         614 NIEDALNQLFRNSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                                             74 SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDALCTHRPDPTGP
                DKVTTLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                     WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 3663; DB 4; Length 914;
Pred. No. 4.2e-289;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Bengur, Chaitenya S.
APPLICANT: Retter, Marc W.
APPLICANT: Retter, Marc W.
APPLICANT: Ranger, Gary R.
APPLICANT: Ranger, Gary R.
APPLICANT: Ranger, Gary R.
APPLICANT: Hill, Paul Bary R.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THEI
TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
FILE REPERENCE: 210121.442C9
CURRENT APPLICATION NUMBER: US/10/198,053
CURRENT FILING DATE: 2002-07-17
NUMBER OF SEQ ID NOS: 624
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 312
LENGTH: 914
                                                                                                                                                                                                                              LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                ; Sequence 312, Application US/10198053; Publication No. US20030124140A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 99.9%;
Matches 696; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-198-053-312
                                                                                                                                                                                                                                                                                                                      RESULT 17
US-10-198-053-312
                                                                                                                                                                                                                                 674
                                                                                      554
                                                                                                                          669
                                                                                                                                                                                                                                                                   819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374
                  494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                              유
                                                                                      Š
                                                                                                                    유
                                                                                                                                                         ò
                                                                                                                                                                                          8
                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                339 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVWWNLSNPDPTSSEXITLLRDIQ 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDALCTHRPDFTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SRKFWITERVLQGLLRPLFKMTSVGPLYSGCRLTLLRPEKDGEATGVDALCTHRPDFTGF 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GVTQLGFYVLDRDSLFINGYAPQNLSIRGEYQINFHIVNWNLSNPDFTSSEYITLLRDIQ 493
                  818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INNLRYMADMGQPGSLKFNITDNVMKHLLSPLPQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gарв
                                                                                                                                                                                                                                           APPLICANT: Jiang, Yuqiu
APPLICANT: Jiang, Yuqiu
APPLICANT: Jiang, Yuqiu
APPLICANT: Micham, Jennifer L.
APPLICANT: Micham, Jennifer L.
APPLICANT: Wang, Tongtong
APPLICANT: Wang, Tongtong
APPLICANT: Wang, Tongtong
APPLICANT: Harlocker, Susan L.
APPLICANT: Bennington, Angela Ann
APPLICANT: Bennington, Angela Ann
APPLICANT: Fanger, Gary R.
APPLICANT: Retter, Marc W.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER
FILE REFERENCE: 210121.491C7
CURRENT APPLICATION NUMBER: US/10/010,742
CURRENT FILLING DATE: 2001-11-30
NUMBER OF SEQ ID NOS: 307
SOFTWARE: FaetSEQ for Windows Version 4.0
SEQ ID NO 206
TUNCATH. 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
                                                   LRWTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 92.9%; Score 3663; DB 4; Best Local Similarity 99.9%; Pred. No. 4.2e-289; Matches 696; Conservative 0; Mismatches 1;
                                                                                                                                                                             ; Sequence 206, Application US/10010742; Publication No. US20020146727A1; GENERAL INFORMATION:
                                                                                                                                                                                                                               APPLICANT: Dillon, Davin C.
APPLICANT: Day, Craig H.
APPLICANT: Jiang, Yuqin
APPLICANT: Houghton, Raymond L.
APPLICANT: Mitcham, Jennifer L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
CORGANISM: Homo sapiens
US-10-010-742-206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   314
                                                     674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             579
                      759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       원
장
원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                      유
                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
```

338

218 133 278 193

73

Gaps

398 313 458 373 518 433 578

253

요

ठ

셤

ઠે g ò 셤

ò

```
NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEEF 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              339 INNLRYMADMGQPGSLKFNITDNYMKHLLSPLPQRSSLGARYTGCRVIALRSVKNGAETR 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INNIRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     254 VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 458
                                                                                              494 DKVITLYKGSQLHDTFRFCLVTNLTMDSVLVTVKALFSSNLDPSLVRQVFLDKTLNASFH
                                                                                                                                                                     554 WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                                                                                                                                                                                                     759 NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYERF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SRKFNTTERVLQGLLRPLFKNTSVGPLYSGCRLTLLRPEKDGEATGVDAICTHRPDPTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENMWPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 206, Application US/10714389

Publication No. US200401018981

GENERAL INRORMATION:

APPLICANT: Diavin C.

APPLICANT: Day, Craig H.

APPLICANT: Houghton, Raymond L.

APPLICANT: Micham, Jennifer BapticANT: Wang, TongTong

APPLICANT: Moneill, Particia D.

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER

FILE REFERENCE: 210121.491D1

CURRENT APPLICATION WHEER: 2031-1-14

NUMBER OF SEQ ID NOS: 301

SOFTWARE: PastSEQ for Windows Version 3.0

SEQ ID NO 206

LENGTH: 914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                                                                                                                                                                      819 LRWITRNGIQLQNFILDRSSVLVDGYFPNRNEPLIGNS 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 3663; DB 4;
Pred. No. 4.2e-289;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 92.9
Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT
; ORGANISM: Homo sapien
US-10-714-389-206
                             434
                                                                                                                                                                                                                                             614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314
                                                         ద
                                                                                                ઠ
                                                                                                                            셤
                                                                                                                                                                     ò
                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                            698
                                                                                                                          WIGSTYQLVDIHVTEMESSYYQPISSSSTQHPYINFTITMLPYSQDKAQPGTTNYQRNKR 613
                                                                                                                                                                   758
                                                                                                                                                                                                        673
                                                                                                                                                                                                                   SRKFWTTERVLQGLLRPLFKNTSVGPLYSGCRLTLRPEKDGRATGVDALCTHRDDFTGP 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLDREQLYLELSQLTHSITELGPYTLDRDSLYVNGFTHRSSVPTTSTGVVSEEPFTLNFT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VDLLCIYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73
NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVAIYEFF
                                                       DKVTTLYKGSQLHDTPRFCLVTNLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                                                                              14 FTHRSSVSTTSTPGTPTVYLGASKTPASIFGPSAASHLLILFTLNFTITNLRYEENNMPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 194 INNLRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 339 INNLRYWADMGQPGSLKFNITDNVWKHLLSPLFQRSSLGARYTGCRVIALRSVKNCAETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VDLLCTYLQPLSGPGLPIXQVFHELSQQTHGITRLGPYSLDKDSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TPKPATTFLPPLSEATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTEGVLQHLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLFQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLPQKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 3663; DB 4; Length 914;
Pred. No. 4.2e-289;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                        Sequence 478. Application US/10198053
Sequence 478. Application US/10198053
Sequence 478. Application No. US20030124140A1
GENERAL INFORMATION:
APPLICANT: Bangur, Chaitanya S.
APPLICANT: Renger, Gary R.
APPLICANT: Hill, Paul
ITILE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THEE
TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
ITILE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
TITLE OF INVENTION: AND DIAGNOSIS OF OVARIAN CANCER
CURRENT APPLICATION NUMBER: US/10/198,053
CURRENT FILING DATE: 2002-07-17
NUMBER OF SEQ ID NOS: 624
SSETWARE PRESENCE: AINDOWS Version 4.0
SEQ ID NO 478
LENGTH: 914
                                                                                                                                                                                                                                                                                          819 LRWITRNGTQLQNFTLDRSSVLVDGYFPNRNEPLIGNS 855
                                                                                                                                                                                                                                                                     674 LRMTRNGTQLQNFTLDRSSVLVDGYSPNRNEPLTGNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-198-053-478
                                                                                                                                                                                                                                                                                                                                                           RESULT 18
US-10-198-053-478
                                                                                       639
                                                                                                                                                             669
                                                                                                                                                                                               614
                      579
                                                                                                                          554
                                                     494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      519
```

셤 ઠે 셤

ò

셤 ሯ 셤 ઠે 셤 ò 셤 δ

ò

```
554
                                                                          494
                           519
                                          434
                                                          579
                                                                                         639
            374
                                                                                                                   중 음
                                                                                                                                                  a
                                                                                                                                                                 ò
                                                                       8 6
                                                                                                   ठ
         8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TPKPATTFLPPLSBATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTBGVLQHLLR 373
                                                                                                                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                    INNIRYMADMGQPGSLKFNITDNVMKHLLSPLFQRSSLGARYTGCRVIALRSVKNGAETR 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        218
                                                                                                                                                                                                                                                                                                                                                                                                       73
                                             758
                                                                                                                                         673
                                                                                                                                                         818
                                                                                                            613
                                                                            553
                                                                                            698
 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VDLLCTYLQPLSGPGLPIKQVFHELSQQTHGITRLGPYSLDKOSLYLNGYNEPGPDEPPT
                                                                                                                                                                                                                                                                                                                                                                                                     NIEDALWOLFRNSSIKSYFSDCQVSTFRSVPNRHTGVDSLCNFSPLARRVDRVAIYEEF
                                                                                                                                                 Gaps
TPKPATTFLPPLSEATTAMGYHLKTLTLNFT1SNLQYSPDMGKGSATFNSTEGVLQHLLR
                PLFOKSSMGPFYLGCQLISLRPEKDGAANGVDTTCTYHDDPVGPGLDIQQLYWELSQLTH
                       ö
                                                                                                                                                                                                                                                                                                                                                                        92.9%; Score 3663; DB 4; Length 914; 99.9%; Pred. No. 4.2e-289; tive 0; Mismatches 1; Indels (
                                                                                                                                                                                                                                                    APPLICANT: Dillon, Davin C.
APPLICANT: Dillon, Davin C.
APPLICANT: Dillon, Variu
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THEIR
TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER
TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER
TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER
CURRENT APPLICATION NUMBER: US/10/717,296
CURRENT RILING DATE: 2003-11-19
NUMBER OF SEQ ID NOS: 313
SOFTWARE: FASELSEQ for Windows Version 4.0
: SEQ ID NO 206
: LENGTH: 914
                                                                                                                                                                          LEMTRNGTOLONFTLDRSSVLVDGYSPNRNEPLTGNS 710
                                                                                                                                                                                   ; Sequence 206, Application US/10717296
; Publication No. US20040142361A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                              92.9
Best Local Similarity 99.9
Matches 696; Conservative
                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                     RESULT 20
US-10-717-296-206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314
                                                                                                                                                                               674
                                                                                                                                                614
                                                                                                                                                               759
                                                                                                  639
        $29
                      374
                                                    434
                                                                   579
                                                                                   4 9 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                              g
                                                                                                                                                ઠે
                                                                                                                                                           8 &
                                                                                                                                                                                           ద
                                                                                              요
장
                                                               요
                                                                                8
                      ð
                                    유
                                                8
```

```
673
                                                                                                                               758
                                                                                                                                                               818
                                                               638
                                                                                553
                                                                                               698
                                                                                                               613
TPKPATTFLPPLSBATTAMGYHLKTLTLNFTISNLQYSPDMGKGSATFNSTBGVLQHLLR 518
                 433
                                                493
                                                                                                                                              NIEDALNQLFRNSSIKSYFSDCQVSTFRSVPNRHHTGVDSLCNFSPLARRVDRVALYBEF
                                                                                                                                                      WLGSTYQLVDIHVTEMESSVYQPTSSSSTQHFYLNFTITNLPYSQDKAQPGTTNYQRNKR
                                                                                DKVTTLYKGSQLHDTFRFCLVTVLTMDSVLVTVKALFSSNLDPSLVEQVFLDKTLNASFH
                                                                                        PLPOKSSMGPFYLGCQLISLRPEKDGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTH
                                                                                                                                                                                53
```

Search completed: March 20, 2006, 07:35:08 Job time : 137.781 secs

```
Q58661 mus musculu Q4v9v8 mus musculu Q8k024 mus musculu Q9d814 mus musculu Q5bjz2 rattus norv P01755 mus musculu Q7tmt6 mus musculu Q5fvp3 rattus norv G5r3v0 mus musculu Q991c4 mus musculu Q90xf0 mus musculu Q60x6 mus musculu Q8vdc9 mus musculu Q8vdc9 mus musculu Q8vdc9 mus musculu Q8vdc9 mus musculu Q8vdc9 mus musculu Q8vdc9 mus musculu Q4qqv0 rattus norv Q4qqv0 rattus norv Q4qqv0 rattus norv Q4qqv0 rattus norv Q4qqv0 rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  musculu
musculu
                                                                                     March 20, 2006, 07:28:38; Search time 26.0454 Seconds (without alignments) 3765.293 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26pja7 mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                     US-10-687-035-34
758
1 MGMSWIFLFLLSGTAGVHSE......RGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QS8e56 mus m
Q9Vcv5 mus m
Q91wr1 mus m
P01746 mus m
Q6pjb2 mus m
Q66by9 mus m
P01751 mus m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                   2166443 segs, 705528306 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0470AB6_MOUSE

Q7TMK1_MOUSE

058E56_MOUSE

080E56_MOUSE

0910KR1_MOUSE

0910KR1_MOUSE

0910KR1_MOUSE

0910KR1_MOUSE

0650M9_MOUSE

0650M9_MOUSE

0650M9_MOUSE

060C24_MOUSE

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries
                                                           OM protein - protein search, using sw model
                                                                                                                                                                                                                     BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                            UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match Length DB
                                                                                                                                                     Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database :
                                                                                                                                                                                                                                                                   Searched:
                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š.
```

		-										_			_			_						_			-	_						-		-							_		_		_			_		_			-	-		_	_		_		_
:																		•			••									٠,		٠.																				*				٠.						:	
32	 	٠ 4 ت	n (36	37	38	33	40	41	42	43	44	. A	2 4	7 7	* <	0 0	ה כ	3 5	22	23	54	52	26	23	28	29	9	61	62	63	64	ر و ر	9 7	2 4	9	20	71	72	73	4.	2,7	7.2	78	79	80	81	2 6	0 6	85	98	87	88	200	y 2	92	93	94	95	9 0	8	6	100
480	479.5	4 / V	4 .	475	471	470.5	470.5		469.5				45.00	0 0	0 L	יע הע	ם מס	0.00	٦	444	443.5	4	4	437.5	4	36	S	4	434.5	434	434	•	433.5	454	•	430.5	•	428	428	426	424	474	422.5	ł	421	S	420.5	N -	- ۱	•	416		413.5	11.	4114	408.5	408	407	•	404.5	404	0	400.5
63.3	93		200	62.	62.	62.	62.	62.	61.	61.	61	9					9 6		מי	8	28	58	57	57.	57.	57.	57.	57.	57.	57.		_	7.7										55.0			55.5									5.4.2				53.6	53.4	5.0	53.0	5.2 A
487	134	487	/11	486	118	117	616	488	117	117	138	145	170	0 1 7	900	0 C C C	7 0	120	145	143	123	145	137	140	117	481	474	145	146	117	143	145	142	777	145	468	120	141	145	117	117	243	147	143	109	140	480	200	208	136	143	117	121	143	143	120	118	143	518	497	448	147	476
0.0		٧.	٦ (7	-	-	N	7		N	-	~	1 0	4 (۹ ۲	v c	٧ -	٦ ،	ا د	۰,	0	7	7	N	-	7	~	7	7	-	~	~	~ -	٦ ,	4 C	۰ د	-	~	~	٦,	- (4 C	9 (1 (7	~	0	N C	4 (1 0	~	н.	- (7	4 C	1 (4	7	0	(7)	77 (· CV
Q65ZL2_9MURI	SE MOUS	USKI/Z MOUSE	HVSZ MOUSE	QSHZY6_MOUSE	HV51 MOUSE	HV12 MOUSE	O504M7 MOUSE	OBKOF2 MOUSE	HV13 MOUSE	O9OXE9 MOUSE	HV48 MOUSE	092407 MOIISE	Cooker Morres	COCOS MOOS	Control Car	Cozare Mouse	COZEST MOUSE	DOUGH MOUSE	COST MOTER	O924B0 MOIISE	OBVIJ1 MOUSE	0924R4 MOUSE	Q924R6 MOUSE	Q924P8 MOUSE	HV09 MOUSE	Q91WT3_MOUSE	Q8R3H6_MOUSE	Q924R3_MOUSE	092403_MOUSE	HV04_MOUSE	Q924Q0_MOUSE	Q924P7 MOUSE	C924QI MOUSE	HVU6 MOUSE	092406 MOUSE	OSOSN9_MOUSE	HVS0 MOUSE	Q924Q4 MOUSE	Q924Q9_MOUSE	HV05_MOUSE	HV49 MOUSE	CATACINO MOUSE	O92583 MOUSE	0924P9_MOUSE	Q9JL75 MOUSE	Q924R2_MOUSE	O6P089_HUMAN	Cenosi Human	OCTORY HIMAN	O7TPE3 MOUSE	Q924R7 MOUSE	HV10 MOUSE	HV01 MOUSE	Q91V67 MOUSE	Q91VAZ_MOUSE	OSF211 MOUSE	Q9Z1C4_MOUSE	Q924P6_MOUSE	Q6N030 HUMAN	QBWY24 HUMAN	OSNO41 HIMAN	9 24	OS69X1 MOUSE
065212	065zr6	Z/TX8Ö	P06327	Q5nzy6	P06330	P01756	O504m7	08k0£2	P01757	09gxe9	DOSCOG	092407	Conce	25225	CONTRACT	Q924F8	1017CD	F0104	092471	092410	08vij1	0924r4	Q924r6	Q924p8	P01753	Q91wt3	Q8r3h6	Q924r3	Q924q3	P01748	Q924q0	0924p7	092441	F01/50	0924d6 0924n5	05050	P06329	Q924q4	092449	P01749	P06328	0244Q5	Q7.cq442 092583	092409	091175	Q924r2	Q6p089	Qendal	062087	Q7tpe3	Q924r7	P01754	P01745	Q9160	091VBZ	05f2i1	Q9z1c4	0924p6	Q6n030	Q8wy24	O6n041	P01744	2
	2 5			mus	BUM (mus.		1	E	1	Ē			1 1	1 2						1				mus													뎥	핕							1		OHOU					mus				mus	enm.	Dmon.		ביים מונים מונים	homod	
sp. f	musculu	muscul	musculu	muscul	muscul	musculu	muscul	musculu	musculı	muscul	Lucatim	11.901		III DO DIII	במה מסב	מים מים	muscut.	muscul.		10011	musculu	muscul	musculu	muscul	muscul	muscul	muscul	muscul	muscul	muscul	muscul	muscul	muscut	musculu	musculu	miscul	muscul	muscul	muscul	muscul	muscul	muscul	misculu	musculu	musculu	musculu		, sapien	indecute.	T SCU	musculu	musculu	mnscnin	mascata	musculu	musculu	musculu	ພນອດນຸ	sapi	sapien	musculu santen		muscu

ALIGNMENTS

```
RESULT
Q4VAB6 1
                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                          셤
                                                                                                  ò
                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TEXALGE-MARMENTY UNDER GREATELIZED CO 11003, FWAIV-LIK/WHILI MODEL.

EXPLORESION Griven by a MATV-LIRE enhancer;

XX MEDLINE=2238827; PubMed=1247932; DOI=10.1073/pnas.242603899;

XX REDLINE=2238827; PubMed=1247932; DOI=10.1073/pnas.242603899;

XX Strausberg R.L., Feingold B.A., Grouse L.H., Derge J.G.,

XX Altschul S.F., Zeeberg B., Buercow K.H., Schaefer C.F., Bhat N.K.,

XX Altschul S.F., Zeeberg B., Buercow K.H., Schaefer C.F., Bhat N.K.,

XX Altschul S.F., Zeeberg B., Buercow K.H., Schaefer C.F., Bhat N.K.,

XX Altschul S.F., Jordan H., Moore T., Max S. I., Wang J., Haieh F.,

XX Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

XX Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,

XX Brownstein M.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

XX Broaks S.A., McKwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

XX Inalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

XX Helton E., Ketteman M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

XX Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

XX Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

XX Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

XX Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

XX Brooker A., Grimwood J., Schmut J., Marra M.A.,

XX Brooker A., Grimwood J., Schmut J., Smailus D.E.,

XX Brooker A., Schein J.E., Jones S.J.M., Marra M.A.,

XX Brooker A., Schein J.E., Jones S.J.M., Marra M.A.,

XX Brooker A., Schein J.E., Jones S.J.M., Marra M.A.,

XX Brooker A., Schein J.E., Jones B.D., McKer E.D., Smailus D.E.,

XX B. A., McKerley B. M. J., Schein J.E., Jones H.A.,

XX B., Marra M.A.,

XX B., McKerley B., Wooder B., Warra M.A.,

XX B., Wooder B., Wooder B., Wooder B., Wooder B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia, Sciurognathi,
Muroidea, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           IISSUE=Mammary tumor metastatized to lung. MMTV-LTR/Wnt1 model.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-Mammary tumor metastatized to lung. MMIV-LTR/Wntl model.
Expression driven by an MMIV-LTR enhancer.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 472;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; BC018535; AAH18535.1; -; mRNA.
HSSP; P01865; 1KB5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52299 MW; 165169C23D55D4AB CRC64;
                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 79.4%; Score 601.5; DB 2; Best Local Similarity 79.6%; Pred. No. 1.4e-48; Matches 117; Conservative 6; Mismatches 11;
                                                  472 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antigen binding; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS50835; IG LIKE; 4.
PROSITE; PS00290; IG_MHC; UNKNOWN_1.
                                                  PRT;
                                                                                                       Created)
                                                                                            ...oub-2004 (TrEMBLrel. 27, La 05-JUL-2004 (TrEMBLrel. 27, La Hypothetical protein. Name-Igh-la; Mus mire...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR003599; Ig.
InterPro; IPR007110; Ig-like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR003597; Ig_cl.
InterPro; IPR003006; Ig_MHC.
InterPro; IPR003596; Ig_v.
                                          OGPJA7 MOUSE PRELIMINARY;
OGPJA7;
05-JUL-2004 (TrEMBLrel. 27
05-JUL-2004 (TrEMBLrel. 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -set; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and mouse cDNA sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGI; MGI:96443; Igh-la.
GO; GO:0003823; F:antige
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SM00407; IGC1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   472 AA;
                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF07654; Cl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=Czech II;
                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=Czech II;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : SM00406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                            MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART
RESULT 1
Q6PJA7_MC
                                                  SOW BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANCH BRANC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
KALMENDAIN, 1125BESCOLOR MALANE PLONGE STANDAIN TALASE STANDE STANDAIN TALASE STANDES STANDAIN TALASE STANDAIN TALASE STANDAIN TALASE STANDAIN TALASE STANDAIN TALASE STANDAIN TALASE STANDAIN TALASE STANDAIN TO THE STANDAIN TO THE STANDAIN THE SCHOLLE G.D., SCHOLLE G.D., A Altechul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K., A Altechul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K., A Altechul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K., Rozhon D., Marusina K., Farmer A.A., Rubin G.W., Hong L., Brander A.A., Rubin G.W., Hong L., Scheetz T.E., Brownstein M.J., Usdin T.B., Donaldo M.F., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Rabas S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hully S. M., Sodergren E.J., Lu X., Gibbs R.A., Anting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Mutrafield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Manner D.M., Schein J.E., Jones S.J.M., Marra M.A., Schein J.E., Jones J.M., Marra M.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MCMSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .,
-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 483;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
EMBL, BCO96462; AAH96462.1; -; mRNA.
Hypothetical protein:
SEQUENCE 483 AA; 52436 MW; 368E7BEEGBGDE9EF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-SEP-2005 (TrEMBLrel. 31, Created)
13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
Hypothetical protein.
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 78.7%; Score 596.5; DB 2
80.6%; Pred. No. 4.2e-48;
tive 9; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          483 AA
                                                                                                                                                                              139
                                                                                                                                                                                                                                                               118 -- GYISYYSYDHYFDYWGQGTTITVSS 142
                                                                                                                                                                                   121 GSGY-----YFDYWGQGTTLTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GSGYYFDYWGOGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 RTG-LFDYWGQGTTLTVSS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=FVB/N; TISSUE=Colon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE.
STRAIN=FVB/N; TISSUE=Colon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and mouse cDNA sequences."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q4VAB6 MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 80.6
Matches 112; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH MGC Project
                                                                                                                                                                                                                                                                                                                                                                                                         2
MOUSE
```

```
121 -GSGYYFDYWGQGTTLTVSS 139
                            121 SGSYWYFDVWGAGTTVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q58E56
                                                                                                                          ઠે
ò
                                                                                                                                                                                                                                                                                          MEDLINE=22388257; PubMed=12477932; DOI: 10.173/pnas.242603899;
A Klauener R.L., Feingold E.A., Grouse L.H., Derge J.G.,
A Klauener R.D., Colling F.S., Wagner L., Schaefer C.R., Bhat N.K.,
A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
A potente N., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Brownstein M.J., Usdin T.B., Tochhyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Brownstein M.J., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
N. Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Nilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Rhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Butterfield Y.S.N., Krzywinski M.I., Skalaka U., Smailus D.E.,
Butterfield Y.S.N., Krzywinski M.I., Skalaka U., Smailus D.E.,
Butterfield A.S., Nonen S., Schmutz J.M., Marra M.A.,
Schnerch A., Schein J.B., Jones B.J.M., Marra M.A.,
Scherzation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGWSWVFLFLLSGTAGVLSEVQLQQSGPELVKPGASVKISCKASGYTFTGYYMHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUB=Mammary tumor metastatized to lung. MMTV-LTR/Whtl model. Expression driven by an MMTV-LTR enhancer.; Strausberg R.; Strausberg R.; Submitted (AUG-2003) to the EMBL/GenBank/DDBJ databases. EMBL; BCO55910; AAH55910.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ä
                                                                                                                                                                                                                                                                    IISSUE=Mammary tumor metastatized to lung. MMTV-LTR/Wntl model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        77.2%; Score 585.5; DB 2; Length 470; 80.0%; Pred. No. 4.5e-47; ive 9; Mismatches 18; Indels 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           n; Immunoglobulin domain.
51728 MW; 6D90E4DF896BB090 CRC64;
                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                     Expression driven by an MMTV-LTR enhancer.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO; GO:0003823; F:antigen binding; IEA. InterPro; IPR007110; Ig-like. InterPro; IPR003597; Ig cl. InterPro; IPR003006; Ig WHC. InterPro; IPR003596; Ig v. Pfam; PF07654; Cl-set; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMATT; SMO0406; IGV; 1.
PROSITE; PS50835; IG LIKE; 4.
PROSITE; PS00290; IG MHC; UNKNOWN 1.
                                                                                       01-MAR-2004 (TrEMBLrel. 26, La
Hypothetical protein AI324046.
                                          Q7TMK1;
01-OCT-2003 (TrEMBLrel. 25,
01-OCT-2003 (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA sequences."
           QTTWKI MOUSE DRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 80.0
les 112; Conservative
                                                                                                                                                                                        Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hypothetical protein;
SEQUENCE 470 AA; 5:
                                                                                                                                          Mus musculus (Mouse)
                                                                                                                                                                                                                                       SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEOUENCE
                                                                                                                                                                                                 NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=CZECH II;
                                                                                                                                                                                                                                                       STRAIN=CZECH II;
                                                                                                                          Name=AI324046;
                                                                                                                                                                                                                                       NUCLEOTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
```

```
This Swiss-Prot entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MGWSWIFLFLLSGTAGVHSEVOLOQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GKILBWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCAR 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 GKSLEWIGYIYPYNGGTGYNQKFKSKATLTVDNSSSTAYMELSSLTSEDSAVYYCAR 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the European Bioinformatics Institute. There are no restrictions on use as long as its content is in no way modified and this statement is
                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SIMILARITY: Contains 1 Ig-like (immunoglobulin-like) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Givol D., Zakut R., Effron K., Rechavi G., Ram D., Cohen J.B.;
"Diversity of germ-line immunoglobulin VH genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            76.4%; Score 579; DB 1; Length 117; 92.3%; Pred. No. 3.9e-47; ive 3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ig heavy chain V region 108A Ig-like.
                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eute
Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia,
Muroidea, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           domain; Immunoglobulin V region; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12972 MW; 428CB44DF25D1BC2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                                    21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         477 AA
117 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; J00488; AAA38519.1; -; Genomic_DNA.
PIR; A02041; HVMS8A.
                                                                                                                                                                                                                                                  Ig heavy chain V region 108A precursor
Name=Igh-VJ558;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=81245215; PubMed=6789211;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSSP; P01751; INQB.
SMR; P01758; 20-116.
MGI: MGI: 96486; Igh-VJ558.
InterPro; IPR007110; Ig-like.
InterPro; IPR003596; Ig_V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PS50835; IG LIKE; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TremBrel. 30, 10-MAY-2005 (Trem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Diversity of germ-line ir
Nature 292:426-430(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QSBES6_MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 92.3
Matches 108; Conservative
STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00406; IGV; 1
PROSITE; PS50835; IG L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        117 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           !gh-la protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mmunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Name=Igh-la;
MOUSE
```

· 技术。

```
8
                                                                                                                                                                                            셤
                                                ò
                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Will Woll's 96443; Igh-1a.

GO; GO:0042571; Cimminoglobulin complex, circulating; IDA.

GO; GO:000323; Fantigen binding; IDA.

GO; GO:000323; Fantigen binding; IDA.

GO; GO:000318; Piantigen brocessing; IDA.

GO; GO:000333; Piantigen processing; IDA.

GO; GO:0006311; Piphagocytosis, recognition; IDA.

GO; GO:0005010; Piphagocytosis, recognition; IDA.

GO; GO:0005010; Piphagocytosis, recognition; IDA.

GO; GO:0005078; Pipositive regulation of immune response; IDA.

GO; GO:0005076; Pipositive regulation of phagocytosis; IDA.

GO; GO:0001812; Pipositive regulation of type II hypersensitivity; IDA.

GO; GO:0001812; Pipositive regulation of type II hypersensitivity; IDA.

GO; GO:0001812; Pipositive regulation of type II hypersensitivity; IDA.

GO; GO:0001812; Pipositive regulation of type II hypersensitivity; IDA.

GO; GO:0001812; Pipositive regulation of type II hypersensitivity; IDA.
                                                                                                                                                          Expression driven by an MWIV-ITR enhancer.;

KETAUSE-FORMELL WICKER ENHANCER.;

KETAUSE-FORMELL F., Grouse L.H., Derge J.G.;

KIAUSERER R.L., Felngold E.A., Grouse L.H., Derge J.G.;

KIAUSERER R.L., Felngold E.A., Grouse L.H., Derge J.G.;

KIAUSERER R.L., Felngold E.A., Grouse L.H., Derge J.G.;

KIAUSERER R.L., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hateh F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Repleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Robards S.A., McEwan P.J., McKernan K.J., Abramson R.D., Mullahy S.J.,

Robards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Haleseley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

Reneration and initial analysis of more Hanls, 000 full-length human mouse conv.
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                FISSUE=Mammary tumor metastatized to lung. MMTV-LTR/Wnt1 model.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FISSUE=Mammary tumor metastatized to lung. MMTV-LTR/Wnt1 model.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 75.9%; Score 575.5; DB 2; Length 477; Best Local Similarity 77.5%; Pred. No. 4.1e-46; Matches 110; Conservative 10; Mismatches 19; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.
EMBL; BC092061; AAH92061.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SMUGGUO; _____, LIKE; 4.
PROSITE; PS50839; IG_MHC; UNKNOWN 1.
PROSITE; PS00290; IG_MHC; UNKNOWN 1.
477 AA; 52222 MW; 519211BE5EA12364 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Expression driven by an MMTV-LTR enhancer.; NIH MGC Project;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ig_c1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR003599; IG.
InterPro; IPR007110; IG-like
InterPro; IPR003006; IG/MHC.
InterPro; IPR003596; IG/MHC.
Pfam; PF07654; Cl-set; 3.
                                                                                                    ICLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-CZECH II;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00407
SMART: SM00406
```

```
TISSUE-Mammary tumor. WAP-TGF alpha model. 7 months old;

KEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

REDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

REDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

RELIABLE R.D., Colling F.S., Wagner L., Shenmen C.M., Schuler G.D.,

RAL Altschul S.F., Zeeberg B., Buchow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Mang J., Haich F.,

A blatchench M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RAL S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gay L.J., Hulyk S.W.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Nilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Rahet S. K., Cimwood J., Schmutz J., Myers R.M.,

Rodriguez A.C., Girmwood J., Schmutz J., Myers R.M.,

Rodriguez A.C., Girmwood J., Schmutz J., Myers R.M.,

Rodriguez A.C., Girmwood J., Schmutz J., Myers R.M.,

Butterfield Y.S.M., Krzywinski M.I., Skalska U., Smailus D.E.,

B. Hutterfield Y.S.M., Krzywinski M.I., Skalska U., Smailus D.E.,

R. Teleneration and initial analysis of more than 15,000 full-length human
                                                                                                               61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWD- 119
1 MGWSWIFLFLLSGTAGVLSEVQLHQSGPELVEAGASVKLSCKASGYTFGDYYVHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Buarchontoglires, Glires, Rodentia, Sciurognathi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FISSUE=Mammary tumor. WAP-TGF alpha model. 7 months old;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52326 MW; 52B44C5826807143 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ensembl; ENSMUSG0000021155; Mus musculus.
GO; GO:0003823; F:antigen binding; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; BC018455; AAH18455.1; -; mRNA.
HSSP; P01810; 2FBJ.
SWR; Q8VCV5; 20-239.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS50835; IG_LIKE; 4.
PROSITE; PS00290; IG_MHC; UNKNOWN_2.
                                                                                                                                                                                                                       120 --FGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                               InterPro; IPR007110; Ig-like.
InterPro; IPR003597; Ig_cl.
InterPro; IPR003065; Ig_MHC.
InterPro; IPR033966, Ig_WHC.
Pfam; PP07654; Cl-8et; Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-MAR-2002 (TrEMBLrel. 20,
01-MAR-2002 (TrEMBLrel. 20,
01-MAR-2004 (TrEMBLrel. 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mouse cDNA sequences."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QBVCVS_MOUSE PRELIMINARY;
Q8VCVS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF07654; C1-set;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mmunoglobulin domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOC238447 protein.
Name=LOC238447;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=Mix FVB/N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=Mix FVB/N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH MGC Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                      MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HERE THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRACT OF THE SECOND CONTRA
```

1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH

52965 MW; F12068460B400B9D CRC64;

488 AA;

SEQUENCE

```
MEDLINE=22388257; PubMed=1247932; DOI=10.1073/pnas.242603899;

A Klausner R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hashe F.,

Balatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M.J., Usdin T.B., Tooshyuki S., Carninci P., Prange C.,

Brownstein M.J., Usdin T.B., Tooshyuki S., Carninci P., Prange C.,

Brownstein M.J., Usdin T.B., Tooshyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malack J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Pahey J., Helton B., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G.,

Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,

Butterfield Y.S.N., Krzywinski M.I., Skalaka U., Smailus D.E.,

"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                  GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                            61 GKSLEWIGYIDPYNGGSSYNQKFKGKATLITVDKSSNTAFMYLNNLTSEDSAFYYCAREWY 120
                                                                                                                                    1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;
                                         Gaps
                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausberg R.;
Submitted (SEP-2001) to the EMBL/GenBank/DDBJ databases.
Submitted (SEP-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; BC013539; AAH13539.1; -; mRNA.
HSSP; P01751; JAKW.
Ensembl; ENSMUSG0000021155; Mus musculus.
MG1; MG1:96486; Igh-VU558.
GO; GO:0003823; P:antigen binding; IEA.
InterPro; IPR007110; Ig-1ike.
InterPro; IPR003596; Ig G1.
InterPro; IPR003596; Ig MHC.
InterPro; IPR003596; Ig V.
PFam; PF07654; C1-set; Z.
                                      19; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
   Pred. No. 5.1e-45;
                               13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00290; IGV; 1.
PROSITE; PS00290; IG_LIKE; 4.
PROSITE; PS00290; IG_MHC; UNICNOWN_2.
                                                                                                                                                                                                                                                                                                                                                                                                          |: :| :|||| :||||:
121 GA--WFAFWGQGTLVTVSA 137
                                                                                                                                                                                                                                                                                                                                                                GSGYYFDYWGQGTTLTVSS 139
75.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-DEC-2001 (TrEMBLrel. 19, 01-DEC-2001 (TrEMBLrel. 19, 01-MAR-2004 (TrEMBLrel. 26, 19h-VJ558 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=FVB/N; TISSUE=Kidney;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=FVB/N; TISSUE=Kidney;
Best Local Similarity 75.5%
Matches 105; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OFIWRI MOUSE PRELIMINARY, OFIWRI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [mmunoglobulin domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 7
Q91WR1 MO
                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HID DE REAL PROPERTIES OF THE PROPERTIES OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF TH
                                                                                                 ઠે
```

```
Straubberg R.L., Feingold B.A., Grouse L.H., Derge J.G.,

Riaugner R.D., Colling F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heiber N.K.,

Boatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M., Soares M.B., Bonaldo M.F., Casrainci P., Frange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Boask S.A., McZwan P.J., WcKernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Nilalon D.K., Muzny D.M., Sodergren E.J., Lu K., Gibbs R.A.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers M.A.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Rodriguez A.C., Grimwood J., Schmutz J., Marra M.A.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Rodriguez A.C., Grimwood J., Schmutz J., Marra M.A.,

Rodriguez A.C., Grimwood J., Schmutz J., Sunkara M.A.,

Rodriguez A.C., Grimwood J., Schmutz J., Sunkara M.A.,

Rodriguez A.C., G
                                                                                                                                                                                                                         61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                               1 MGHNWIFLFLLSGTAGIYSEVQLQQSGPELVKPGASVKLSCKASGYTITDYYVNWVKQSH 60
                                                                                                               1 MGWSWIPLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Buarchontoglires, Glires, Rodentia, Sciurognathi,
                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=FVB/N; IISSUE=Colon;
MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnae.242603899;
        Length 488;
Query Match 73.2%; Score 555; DB 2; Length 48 Best Local Similarity 72.6%; Pred. No. 3.7e-44; Matches 106; Conservative 13; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg R.; submitted (SEP-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          roc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSSP; P01751; 1A6W.
Ensembl; ENSMUSGO000021155; Mus musculus.
GO: GO: 003823; F:antigen binding; IEA.
InterPro; IPR00710; Ig-like.
InterPro; IPR003597; Ig_c1.
InterPro; IPR003065; Ig_MHC.
InterPro; IPR003596; Ig_V.
Pfam; PP07654; C1-set; Z.
                                                                                                                                                                                                                                                                                                                                   121 GSGYYP-----DYWGOGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                      EMBL; BC013490; AAH13490.1; -; mRNA.
HSSP; P01751; 1A6W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PP07654; Cl-set; Z.
SMART; SMOAD65; IGV; 1.
PROSITE; PS00395; IG LIKE; 4.
PROSITE; PS00290; IG_MHC; UNKNOWN_2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-FVB/N; TISSUE-Colon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q91WT1 MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Igh-VJ558 protein.
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and mouse cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
MOUSE
                                                                                                                                                       셤
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                             윱
                                                                                                                                                                                                                                                                                                               . ઠે
                                                                                                                                                                                                                                                                                                                                                                                    셤
```

us-10-687-035-34.rup

```
Strausberg R.;
Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; BC018280; AAH18280.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hypothetical protein.
SEQUENCE 465 AA; 51329 MW; 394F43C4E8DB3E21 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                                 465 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL, BC018280; ....
HSSP, P01865; 1KB5.
SMR; QGF9225, 20-641.
MGI; MGI:96443; 1gh-la.
R GO; GO:0003823; F:antigen binding; IEA.
R InterPro; IPR00110; Ig-like.
DR InterPro; IPR003599; Ig cl.
DR InterPro; IPR003597; Ig cl.
DR InterPro; IPR003506; Ig_MRC.
THERPRO; IPR003596; Ig_W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMART; SMO0409; IG; 2.
SMART; SMO0409; IG; 2.
SMART; SMO0409; IGc1; 3.
SMART; SMO0406; IGC1; 3.
PROSITE; PSC0835; IG LIKE; 4.
PROSITE; PSC0290; IG_MHC; UNKNOWN_1.
                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                   PRT;
                                                                                           120 FGSGYYFDYWGQGTTLTVSS
                                                                                                                                                                                                                                                    05-JUL-2004 (TEMBLES). 27,
05-JUL-2004 (TEMBLES). 27,
05-JUL-2004 (TEMBLES). 27,
Hypothetical protein.
                                                                                                                                                                                                        QEPJB2_MOUSE PRELIMINARY;
QEPJB2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and mouse cDNA sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [1]
NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=Czech II
                                                                                                                                                                                           Q6PJB2 MOUSE
                                                                                                                                                                                                                        셤
                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1
                                                                                                                                                                                                                                                               61 GKILLEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWD- 119
                                                                                                                                                                                                                                         61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                           1 MGWRWIFLFLLSGTAGVQCQVQLLQSGPELVKPGASVKISCKASGYTFTSYYIHWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Muridae; Murinae; Mus. NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR007110; Ig-1ike.
InterPro; IPR003596; Ig_v.
SMART; SM00406; Ig_v.
IGV; 1.
PROSITE; PS50835; IG_LIKE; 1.
Hybridoma; Immunoglobulin domain; Immunoglobulin V region; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immunoglobulin heavy chain.";
Science 216:309-311(1982).
-!- SIMILARITY: Contains 1 Ig-like (immunoglobulin-like) domain.
                                                                                                               ñ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-82152818; PubMed=6801765;
Sims J., Rabbitts T.H., Estess P., Slaughter C., Tucker P.W.,
Capra J.D.;
                                                                     DB 2; Length 481;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Somatic mutation in genes for the variable portion of the immunoglobulin heavy chain.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70.3%; Score 532.5; DB 1; Length 1
74.3%; Pred. No. 1.3e-42;
ive 12; Mismatches 23; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ig heavy chain V region 93G7 Ig-like.
                                                                   70.4%; Score 533.5; DB 2; Length 74.1%; Pred. No. 4e-42; ive 9; Mismatches 24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15514 MW; 25A4CBBE31DA5CE8 CRC64;
        Immunoglobulin domain.
SEQUENCE 481 AA; 52105 MW; 97DF68D159463F65 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
21-WAY-2005 (Rel. 47, Last annotation update)
19 heavy chain V region 93G7 precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          140 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; J00493; AAA38128.1; -; mRNA.
HSSP; P01747; 1JFQ.
SMR; P01746; 20-140.
                                                                                                                                                                                                                                                                                                                          GSGYYFDYWGOGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                  GGGWAFDYWGQGTTLTVSS 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 104; Conservative
                                                                                       Best Local Similarity 74.1
Matches 103; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   140 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HV02 MOUSE
P01746;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                    118
                                                                                                                                                                                                                                                                                                                            121
                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       HV02_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
        8 8
                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOUTH THE FETT WAS A STANDARD OF THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE SOUTH THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                       셤
                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                          à
```

```
Expression driven by an MATV-LTR enhancer;

Expression driven by an MATV-LTR enhancer;

REDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

Ratausberg R.L.; Feligold E.A.; Grouse L.H.; Derged J.G.;

Ralaser R.D.; Collins F.S.; Wagner L., Shemmen C.M.; Schuler G.D.;

Altschul S.F.; Zeeberg B.; Buetow K.H.; Schaefer C.F.; Bhat N.K.;

Hopkins R.F.; Jorden H.; Moore T.; Max S.I.; Wang J.; Haich F.;

Districtency L.; Marusina K.B.; Farmer A.A.; Rubin G.M.; Hong L.;

Brownstein M.J.; Usdin T.B.; Toshiyuki S.; Carninci P.; Prange C.;

Raha S.S.; Loquellano N.A.; Peters G.J.; Abramson R.D.; Mullahy S.J.;

Bosak S.A.; Loquellano N.A.; Peters G.J.; Abramson R.D.; Mullahy S.J.;

Richards S.; Worley K.C.; Hale S.; Garcia A.M.; Gay L.J.; Hulyk S.W.;

Nilalon D.K.; Muzny D.M.; Sodergren E.J.; Lu X.; Gibbs R.A.;

Rahas S.S.; Concelland N., Sodergren E.J.; Lu X.; Gibbs R.A.;

Rahas N.; Aroung A.C.; Shevchenko Y.; Bouffard G.G.;

Rahas R.C.; Grimwood J.; Schmutz J.; Myers R.M.;

Rodiguez A.C.; Grimwood J.; Schmutz J.; Myers R.M.;

Butterfield Y.S.N.; Krzywinski M.I.; Skalska U., Smailus D.E.;

Rederation and initial analysis of more than 15,000 full-length human
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=Czech II;
TISSUE=Mammary tumor metastatized to lung. MMTV-LTR/Wntl model.
Expression driven by an MMTV-LTR enhancer.;
                                                                                                                                                                                                                                                                                                                                                                                             IISSUE=Mammary tumor metastatized to lung. MMIV-LIR/Wnt1 model
```

```
$ $ $ $ $ $ $ $ $
                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A KBULINE=22388257; PubMed=1247792; DOI=10.1073/pnas.24263899;

A Klausner R.L., Feingold B.A., Grouse L.H., Derge J.G.,
A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Batchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McKernan K.J., Malek J.A., Gunarane P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Nilalon D.K., Muzny D.M., Sodergren B.J., Lu X., Glbbs R.A.,
Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Makesley R.W., Touchman J.W., Green B.D., Dickson M.C.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                    61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                               1 MGWSWIPLFLLSGTAGVHSEVQLQQSGPBLVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                 1 MGWGWVFLFLLSVTAGVHTQVQLKQSGAELVKPGASVKLSCKASGYTFNSYIMHWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IISSUE=Mammary tumor metastatized to lung. Tumor arose spontaneously;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Mammary tumor metastatized to lung. Tumor arose spontaneously;
              Length 465;
                                               21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NIH MGC Project;
Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases.
EMBL; BC092271; AAH92271.1; -; mRNA.
SMR; 0569W9; 20-464.
MGI; 96443; Igh.la.
GO; GO:0003823; F:antigen binding; IEA.
                                                                                                                                                                                                                                                                                                                                                                    Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .nd mouse cDNA sequences.";
roc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
            ; Score 531; DB 2;
; Pred. No. 6.7e-42;
11; Mismatches 21;
                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                   121 GSGYY-FDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                     --GYYVFDYWGQGTTITVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       interpro; IPR003599; Ig.
              70.1%;
72.9%;
                                                                                                                                                                                                                                                                                                                                                                        10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR003597; Ig cl.
InterPro; IPR003006; Ig MHC
                                                                                                                                                                                                                                                                                                                                   Q569W9 MOUSE PRELIMINARY;
Q569W9;
                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF07654; C1-set;
                                                                                                                                                                                                                                                                                                                                                                                                                        Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE.
            Query Match
Best Local Similarity
Matches 102; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-CZECH II;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                  61
                                                                                                      셤
                                                                                                                                                ò
                                                                                                                                                                           셤
                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                      ò
```

```
This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the RBHL outstation the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way, modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                      61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GQGLEWIGHIYPGNGYTEYNEKFKGKATLTSDTSSSTAYMQLRSLTSENSAIYFCAR--- 117
                                                                                                                                                                                                                                                                                                                                                  1 MEWSCIPLFLISVTAGVHSEVQLQQSGAELVRPGSSVKLSCKTSGYTFTSYYINWVKQRP 60
                                                                                                                                                                                                                                                                                                           1 MGWSWIFLLEGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Heary chain, variable region contribution to the NPb family of antibodies: somatic mutation evident in a gamma 2a variable region."; Cell 24:625-637(1981).
-I MISCELLANEOUS: The B1-8 mu chain mRNA was cloned from a hybridoma making antibodies to the hapten (4-hydroxy-3-nitrophenyl)acetyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LIKE; 1. ; Immunoglobulin V region; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=CS7BL/6;
MEDLINE=81234548; PubMed=6788376; DOI=10.1016/0092-8674(81)90089-1;
Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ig heavy chain V region B1-8/186-2. ..
                                                                                                                                                                                                                                                s,
                                                                                                                                                                                  Length 468;
                                                                                                                                                                                                                                                Indels
                                                                                       Hypothetical protein.
SEQUENCE 468 AA; 51666 MW; 5BF6E527329F8461 CRC64;
                                                                                                                                                                               69.3%; Score 525.5; DB 2
72.3%; Pred. No. 2.3e-41;
live 15; Mismatches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g heavy chain V region B1-8/186-2 precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ensembl; ENSMUSG0000063737; Mus musculus.
Interpro; IPR007110; Ig-like.
Interpro; IPR003596; Ig_v.
SMART; SM00406; IGv; 1.
PROSITE; PS50835; IG_LIKE; 4.
PROSITE; PS00290; IG_MHC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GSGY--YPDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; J00529; AAA38170.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PDB; 1NGP; X-ray; H=20-139
PDB; 1NGQ; X-ray; H=20-139
                                                                                                                                                                         Query Match
Best Local Similarity 72.3
Matches 102; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00406; IGV;
PROSITE; PS50835; IG_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (NPb antibodies)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1A6W; X-ray;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P01751; P01752;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ID-structure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOUSE
```

```
This Swiss-Prot entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSCIMLFLAATATGV4KSQVQLQQPGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Simultaneous expression of immunoglobulin mu and delta heavy chains by a cloned B-cell lymphoma: a single copy of the VH gene is shared by two adjacent CH genes";

Proc. Natl. Acad. Sci. U.S.A. 79:2996-3000(1982).

-!- SIMILARITY: Contains 1 Ig-like (immunoglobulin-like) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE.
MEDLINE-8222262; PubMed-6806821;
Knapp M.R., Liu C.-P., Newell N., Ward R.B., Tucker P.W., Strober S.,
Blattner F.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68.9%; Score 522; DB 1; Length 139; 71.9%; Pred. No. 1.2e-41; Live 12; Mismatches 27; Indels
                        Complementarity-determining-1.
                                                                          Complementarity-determining-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15419 MW; 1B57DD4FD0C9F465 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
10-bavy chain V region BCL1 precursor.
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         136 AA
                                                                                                                               D segment.
JH2 segment.
By similarity.
                                                                                                           Framework-3.
Framework-1.
                                                       Framework-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 YGSSYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133
139 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
HV15 MOUSE
ID HV15 MOUSE
AC P01759;
DT 21--UL-1986 (C
DT 21--UL-1986 (C
DT 10-MAY-2005 (C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                            NON TER
STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                              STRAND
                                                                                                                               REGION
                                                                                                                                                                                                                                                                                                                     STRAND
                                                                                                                                                                                                                                                                                                                                                                         STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAND
                        REGION
                                                                                                                                                                                                                                                                   STRAND
                                                                                REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HELIX
                                                                                                                                                                                                                                                                                         TURN
                                                                                                                                                                                                                                                                                                                                                                                                     SES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Solution of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

```
between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTIONAL MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS TO MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS THE MATTAINS T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MGWSCIIFPLVATATGVHSQVQLQQSGPEVVRPGVSVKISCKGSGYTFTDYAMHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus muğculus (Mouse).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ch 67.9%; Score 514.5; DB 1; Length 136; 1 Similarity 70.5%; Pred. No. 6.2e-41; 98; Conservative 11; Mismatches 27; Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ig heavy chain V region BCL1. Ig-like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Immunoglobulin domain; Immunoglobulin V region; Signal. SIGNAL 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15078 MW; 6827CFBC6DB3F35E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               485 AA
                                                                                                                                                                                                                                                                                HSSP, P01751; INQB.
SERR, P01751; INQB.
SERR, P01751; P136.
ELSEMBJ; ENSWIGGO000063048; Mus musculus.
Interpro; IPR007110; Ig-like.
IMTERPRO; IPR003596; Ig-v.
SMART; SW00406; IGV; I.
                                                                                                                                                                                                       EMBL; J00494; AAA38130.1; -; Genomic_DNA.
PIR; A02042; HVMSB1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   119 -YGNYFDYWGQGTTLTVSS 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30, 1gh-VJ558 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q58E61 MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                136 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Name=Igh-VJ558;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=Czech I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                          removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HAPPEN SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE SERVICE
                    SETTT BERREIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
```

```
GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLIRE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klauener R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleron M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E. Brownstein M.J., Ubdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J. Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .,
8
                                                                                                                                                                                                                                                                   TISSUE-Mammary tumor metastatized to lung. MMTV-LTR/Wntl model.
Expression driven by an MMTV-LTR enhancer.;
       Skalska U., Smailus D.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hul
Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67.5%; Score 512; DB 2; Length 485; 71.5%; Pred. No. 4.5e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23; Indels
                                                                                                                                                                                                                                                                                                                                                               Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases. EMBL; BC092056; AAH92056.1; -; mRNA.
GO: GO:0003823; F:antigen binding; IRA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMART; SMUGUO; LOV, LIKE; 4.
PROSITE; PSSO835; IG LIKE; 4.
PROSITE; PSO0290; IG-MHC; UNKNOWN 2.
A85 AA; 52628 MW; F08CIFB47C4E44EC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                     Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GSGYY-----PDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120 --TYYSYDGGFAYWGRGTLVTVSA 141
   Butterfield Y.S.N., Krzywinski M.I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR003599; Ig.
InterPro; IPR007110; Ig-like.
InterPro; IPR003597; Ig_C1.
InterPro; IPR003006; Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13-SEP-2005 (TrEMBLrel. 31, 13-SEP-2005 (TrEMBLrel. 31, Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-SEP-2005 (TrEMBLrel. 31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 103; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q4V9V8 MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FISSUE=Mammary gland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                    STRAIN-Czech II;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
044090
054090
AC 044090
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
DT 13-SE
Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
CC Numme
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
```

```
61 GKILEWIGYIYPYNGVSDYNQNPKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFFFLLSGTAGVHCQVQLKQSGAELVRPGASVKLSCKASGYTFTDYYINWVKQRP 60
Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Euarchontoglires, Glires, Rodentia, Sciurognathi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Alausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D. Altachul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Maxusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Ponaldo M.P., Casavant T.L., Scheetz T. Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 590;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21; Indels
                                                                                                                                                                                                                                      EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumor. WAP-TGF alpha model. 7 months old,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64892 MW; D425318F9A188B14 CRC64;
                                                                                                                                roc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                67.5%; Score 512; DB 2; 70.5%; Pred. No. 5.6e-40; iive 16; Mismatches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS50835; IG_LIKE; 5.
PROSITE; PS00290; IG_MHC; UNKNOWN_3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                          BC096667; AAH96667.1; -; mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            interPro; IPR003599; Ig.
InterPro; IPR007110; Ig-like
                                                                                                                                                                                                                                    Submitted (MAY-2005) to the
                                                                                                                                                                                                                                                                                                                                          nterPro; IPR003597; Ig_cl.
nterPro; IPR003006; Ig_MHC
nterPro; IPR003596; Ig_v.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 70.5%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QBK024 MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-2002 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
LOC238447 protein.
                                                                                                                                                                                             IISSUE=Mammary gland;
NIH MGC Project;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hypothetical protein
SEQUENCE 590 AA; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse)
                                                                                                                                                                       NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                   Project
                                                                                                                                                                                                                                                                             , MGI:96448;
                                                                                                            and mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GQGPEWIGWISPGDGSSEXNEKFKGKATLIADKSSNTAYMHLSSLTSENSAVYFCARSKL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MGWRWIFLFLLSGTAGVHCQVQLQQSGPELVKPGALVKISCKASGYTFTSFDISWMKQRP 60
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Vilalan D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Whitim M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G., Blakeeley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Chein J.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.B., Jones S.J.M., Marra M.A., "Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 10 day old male pancreas CDNA, RIKEN full-length enriched ilbrary, clone:1810060009 product:immunoglobulin heavy chain 6 (heavy chain of IgM), full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=C57BL/6J; TISSUE=Pancreas;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
Carninci P., Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;
Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2; Length 480;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=Mix FVB/N;
TISSUE=Mammary tumor. WAP-TGF alpha model. 7 months old;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MAY-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Immunoglobulin domain.
SEQUENCE 480 AA; 51646 MW; 8690A63C669CDBED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67.1%; Score 508.5; DB 2
70.5%; Pred. No. 9.6e-40;
ive 13; Mismatches 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            473 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMR; QRK024; 20-238.
Ensembl; ENSWUSGO000021155; Mus musculus.
GO; GO:0003023; F:antigen binding; IEA.
InterPro; IPR007110; Ig-1ike.
InterPro; IPR003597; Ig_c1.
InterPro; IPR003596; Ig_MC.
InterPro; IPR003596; Ig_WHC.
PRO:050596; Ig_WHC.
PRO:050596; Ig_WHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS50835; IG_LIKE; 4.
PROSITE; PS00290; IG_MHC; UNKNOWN_2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; BC029188; AAH29188.1; -; mRNA.
HSSP; P01820; 1G7J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GG---FAYWGQGTLVTVSA 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9D8L4 MOUSE PRELIMINARY;
Q9D8L4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and mouse cDNA sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SM00406; IGv;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH MGC Project;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Name=Iqh-la;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 17
02908L4 MOU
0208L4 MOU
0208L1
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                    SOW KWA RAND DRAND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
```

```
STRAIN-C57BL/6J; TISSUB-Pancreas;
Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
Adachi J., Aizawa K., Bahira S., Pukuda S., Fukunishi Y., Furuno M.,
Anadayaki T., Bano H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
A hangaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
A motani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,
A kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
A kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
A kayama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
A sana T., Miyazaki A., Nishi K., Saito H., Sakai C.,
A sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
A Sogabe Y., Suzuki H., Tagawi M., Tagawa A., Takahashi F., Tanaka T.,
A Tajima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
A Muramatsu M., Hayashizaki Y.;
A Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.

EMBL, AK007918; BAB25349.1; -; mRNA.
                                                                                                                                          Arawai T., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., Arawai T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., Arawawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., Alawawa T., Izawa M., Nishi K., Kiyosawa H., Koaukawa T., Saito R., Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T., Raischmann W., Gasterland T., Gissi C., King B., Kochkwa H., Reischmann W., Etaubli F., Suzuki R., Tomita M., Wagner L., Washio T., Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Bake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Austincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N. H., Lyons P., Marchionni L., Mashima J., Mazarelli J., Mombaerts P., Nordone P., Ring B., Rinngwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storck K.-F., Whirming L., Myashaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-C57BL/6J; TISSUE-Pancreas; MEDLINE-267BL/6J; TISSUE-Pancreas; MEDLINE-20499374; PubMed=11042159; DOI=10.1101/gr.145100; Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itch M., Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length DNA libraries for rapid discovery of new genes."; Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the RIKEN Genome Exploration Research Group Phase I & II Team;
"Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600; MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600; Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Suniata K., Itoh M., Aizawa K., Nagaoka T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Mateumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fujiwake S., Inoue K., Togawa W., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Mateuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.; RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
                                                                                                    STRAIN=C57BL/6J; TISSUE=Pancreas;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=C57BL/6J; TISSUE=Pancreas;
The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE
                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hayashizaki Y.;
                                                                              NUCLEOTIDE
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GNGLEWIGWIYPGNGNTKYNQKFNGKATLTADKSSSTAYMQLSSLTSEDSAVYFCAR-DY 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                     Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McEwran K.J., Malek J.A., Gunaratne P.H., Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Waiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Mhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Botterfield Y.S.N., Krzywinski M.I., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Gchnerch A., Schein J.B., Jones S.J.M., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ig heavy chain V region S43 precursor.

Mus musculus (Mouse).

Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;

Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;

Muroidea; Muridae; Musinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-81234548; PubMed-6788376; DOI=10.1016/0092-8674(81)90089-1.
Bothwell A.L.M., Paskind M., Reth M., Imanishi-Kari T., Rajewsky K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIH MGC Project;
Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.
Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.
I- FUNCTION: Beta-2-microglobulin is the beta-chain of major
histocompatibility complex class I molecules (By similarity).
I- SUBCELLULAR LOCATION: Secreted (By similarity).
EMBL; BC091272; AAH91272.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 458;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ROSITE, PS50835; IG LIKE; 4. mmunoglobulin domain; Repeat. EQUENCE 458 AA; 50161 MW; A0A61DCDD2CA433E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match

66.2%; Score 501.5; DB 2.

Best Local Similarity 69.8%; Pred. No. 4.2e-39;

Matches 97; Conservative 14; Mismatches 25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           137 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120 FDGY--DYWGQGVMVTVSS 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL, BCUSLE, SMR, QSBUZZ; 21-454.
INTERPO; IPR003599; IG.
INTERPO; IPR007110; IG-like.
INTERPO; IPR003597; IG.cl.
INTERPO; IPR003597; IG.cl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Thymus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Baltimore D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HV11 MOUSE
P01755;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
RAPARA BARARA BA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                       PRSPP PO1864; 1806.

PR 1878; Q9D814; 20-469.

PR Ensembl; ENSWINGGORO00054328; Mus musculus.

PR Ensembl; ENSWINGGORO00054328; Mus musculus.

PRI; MG1:96443; 19h-1a.

PRI; MG1:96443; 19h-1a.

PRI; MG1:96443; 19h-1a.

PR G0; G0:0003823; F:antigen binding; IDA.

PR G0; G0:0003823; F:antigen binding; IDA.

PR G0; G0:000333; P:antigen processing; IDA.

PR G0; G0:000333; P:antigen processing; IDA.

PR G0; G0:0008333; P:endly endosome to late endosome transport; IDA.

PR G0; G0:0006910; P:phagocytosis, engulfment; IDA.

PR G0; G0:0006910; P:phagocytosis, engulfment; IDA.

PR G0; G0:0006910; P:positive regulation of immune response; IDA.

PR G0; G0:000112; P:positive regulation of immune response; IDA.

PR G0; G0:000112; P:positive regulation of type I hypersensitivity; IDA.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity; IDA.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity; IDA.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity; IDA.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity; IDA.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity; IDA.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity.

PR G0; G0:000112; P:positive regulation of type II hypersensitivity.

PR G0; G0:000112; P:positive regulation of type II hypersensity.

PR G0; G0:000112; P:positive regulation of type II hypersensity.

PR G0; G0:000112; P:positive regulation of type II hyperse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MEMSWVFLFLLSVTAGVHCQVQLKQSGAELVKPGASVKISCKASGYTFTDYYINWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,
Klauener R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.P., Jordan H., Moore T., Max S.I., Wang J., Haieh F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 66.3%; Score 502.5; DB 2; Length 473; Best Local Similarity 70.4%; Pred. No. 3.5e-39; Matches 100; Conservative 14; Mismatches 21; Indels 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   473 AA; 51699 MW; 9DED57A514475FBB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GSGY---YFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -SGYDYDWPAYWGQGTLVTVSA 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR007110; Ig-like.
InterPro; IPR003597; Ig_cl.
InterPro; IPR003006; Ig_MHC.
InterPro; IPR003596; Ig_V.
Pfam; PF07654; Cl-8et; Ig_V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QSBJZ2_RAT PRELIMINARY;
QSBJZ2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunoglobulin domain
SEQUENCE 473 AA: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SM00406; IGV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOC367586 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=LOC3 67586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Thymus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 118
```

셤 ò

a ò

ò

RESULT 18
0550722 RAT
10 0550722
AC 055072
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 10-MA
DT 11-MA
DT 11-MA
DT 11-MA
MA
MA
REDLI
RA Straul
RA Straul
RA Straul
RA Straul
RA Straul
RA Straul
RA Straul
RA Straul
RA Straul
RA Straul
RA Straul

3; Gapa

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                 This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MGWSCIMLFLAATATGVHSQVQLQQPGAEFVKPGASVKLSCKASGYTFTSYLMHWVNQRP 60
"Heavy chain variable region contribution to the NPb family of antibodies: somatic mutation evident in a gamma 2a variable region."; Cell 24:625-637(1981).
-!- MISCELLANEOUS: The gamma-2a chain mRNA was cloned from a hybridoma making antibodies to the hapten (4-hydroxy-3-nitrophenyl)acetyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ARTRAIN=FVB/N; TISSUE=Salivary gland; MEDLINE=21388257; PubMed=12477932; DOI=10.1073/pnas.242603899; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Complementarity-determining-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Framework-2.
Complementarity-determining-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65.8%; Score 499; DB 1; Length 13
69.1%; Pred. No. 1.9e-39;
ive 14; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 heavy chain V region S43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immunoglobulin domain; Immunoglobulin V region; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15200 MW; ADD5881BF44B8EC9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                613 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JH2 segment.
By similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Framework-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ig heavy ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D segment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                                 EMBL; J00539; AAA38172.1; -; mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JHZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GR--YFDYWGOGTTLTVSS 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                   PARSP, ACECUT, 186W.
SMR, P01751, 16W.
InterPro, IPR007110, Ig-like.
InterPro, IPR003596, Ig_v.
                                                                                                                                                                                                                                                                                                                                                                                                                 SMART; SM00406; IGv; 1.
PROSITE; PS50835; IG_LIKE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2002 (TrEMBLrel. 20, 01-MAR-2002 (TrEMBLrel. 20, 01-MAR-2004 (TrEMBLrel. 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QBVCX7 MOUSE PRELIMINARY;
QBVCX7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 69.1 Schillarity 69.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Muridae; Murinae; Mus
                                                                                                             (NPB antibodies).
                                                                                                                                                                                                                                                                                                          PIR; A02038; G2MS43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                137 1
137 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=Igh-6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                             removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGION
REGION
REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Igh-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 20
089VCX7 MOU
090VCX7 MOU
DT 01-MA
DT 01-MA
DT 01-MA
DT 01-MA
DE 19h-6
GN MUMME
OC BUKAR
OC BUKAR
OC MUMMIM
OC MUMMIM
OC MUMMIM
OC MUMIC
OC NOBI
RR (1)
RR STRAI
RX MEDLI
RA STRAI
      SOLUTION TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT TO THE TENT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

```
HSSP; P01751; 1A6W.

HSSP; P01751; 1A6W.

MG1, MG1:96448; D01751; Gexternal side of plasma membrane; IDA.

RG0; GG0:0019915; C:external side of plasma membrane; IDA.

RG0; GG0:0019915; C:external side of plasma membrane; IDA.

RG0; GG0:0042571; C:external side of plasma membrane; IDA.

RG0; GG0:0042871; C:external side of plasma membrane; IDA.

RG0; GG0:0042871; C:external side of plasma membrane; IDA.

RG0; GG0:0042871; C:external side of plasma membrane; IDA.

RG0; GG0:004888; F:protein binding; IPI.

RG0; GG0:0004888; F:protein binding; IPI.

RG0; GG0:0004888; F:protein of MAPK activity; IDA.

RG0; GG0:0004888; F:extivation of MAPK.

RG0; GG0:0004888; F:extivation of matcherial proliferation; IDA.

RG0; GG0:0004888; F:extivation of matcherial proliferation; IDA.

RG0; GG0:0004888; F:extivation of peptidyl-tyrosine ph. ..; IDA.

RG0; GG0:0004888; F:extivation of matcherial proliferation; IDA.

RG0; GG0:0004888; F:extivation; IDA.

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richards S., Worley D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Schnerch A., Schein J.B., Jones S.J.M., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length human
in Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCA--- 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65.8%; Score 499; DB 2; Length 613;
68.5%; Pred. No. 1e-38;
ive 12; Mismatches 23; Indels 10; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sikder S.K., Borden P., Gruezo F., Akolkar P.N., Bhattacharya S.B., Morrison S.L., Kabat B.A.; In the "Amino acid substitutions in VH CDR2 change the idiotype but not the antigen-binding of monoclonal antibodies to alpha(1----6)dextrans.", J. Immunol. 142:888-893(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Strausberg R.;
Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Immunoglobulin domain.
SEQUENCE 613 AA; 67855 MW; 41A9384DD4C22862 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS50835; IG LIKE; 5.
PROSITE; PS00290; IG MHC; UNKNOWN_3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=FVB/N; TISSUE=Salivary gland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL, BC018315; AAH18315.1; -; mRNA.
PIR; C30562; C30562.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP; P01751; 1A6W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=2464031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
```

ò

117 RWDFGSGYYFDYWGOGTTLTVSS 139

Search completed: March 20, 2006, 07:32:04 Job time: 26.0454 secs

(OTARU) XNALIB 32A9 2IHT

```
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
```

e]
рош
B.W.
using
search,
protein a
•
protein
Š

March 20, 2006, 07:29:34; Search time 5.07199 Seconds (without alignments) 2636.859 Million cell updates/sec Run on:

US-10-687-035-34
758
1 MGWSWIFLFLLSGTAGVHSB......FGSGYYFDYWGQGTTLTVSS 139 score:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

Sequence:

Title: Perfect

283416 segs, 96216763 residues Searched:

283416

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Total number of hits satisfying chosen parameters:

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 100 summaries

PIR_80:* 1: pir1:* 2: pir2:* 3: pir3:* 4: pir4:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Ig heavy chain pre	Ig heavy chain pre	heavy chain	heavy chain	Ig heavy chain (my					heavy chain	heavy	heavy chain	heavy chain		heavy chain		heavy chain	heavy	heavy	heavy	Ig gamma-2b chain		heavy	heavy	Ig heavy chain V r		Ig heavy chain pre	heavy chain	Ig heavy chain V r
SUMMARIES	ID	A27609	H32513	HVMS8A	PL0011	T01407	S37483	PH0105	PH1482	PS0057	PN0444	S45249	HVMSG7	PH1489	PL0012	PH1484	MHMS18	PH1493	PH1498	PH1483	PH1488	G2MS11	821810	HVMSB1	PH1486	A36194	PH1492	PS0024	PL0208	137267
	99	5	7	-	7	7	7	~	~	~	7	~	-	~	7	~	н	7	7	~	7	-	7	-1	~	~	~	~	~	~
	Length	139	137	117	151	140	469	138	140	135	150	138	140	140	166	140	139	135	140	140	140	474	138	136	140	140	135	139	136	128
	Query Match	78.8	77.2	76.4	74.7	74.6	73.7	72.4	72.2	72.2	71.8	70.6	70.3	70.1	70.0	69.3	68.8	68.8	68.7	68.7	68.7	68.6	•		67.6	8.99	66.7	66.4	66.3	65.8
	Score	597	585	579	566.5	565.5	559	548.5	547.5	547	544	535.5	532.5	531.5	530.5	525.5	522	521.5	520.5	520.5	520.5	520			512.5	506.5	505.5	503	502.5	499
	Result No.	н	7	e	4	S	φ	7	œ	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	53

4444		1 C S	C :	ннынныныенноены
0>>00>00>00>00>00>>0	> ~> ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			. > > > > > > > > > 0 0 0 0 0 0 0 0 0 0
Challer Challer Challer Challer	chai	chain chain chain chain chain chain chain		chain chain chain chain chain chain chain chain chain chain chain chain
neavy heavy heavy heavy heavy heavy heavy	neavy neavy neavy neavy neavy neavy neavy	yamma- neavy neavy yamma- neavy neavy neavy	heavy gamma heavy heavy heavy heavy heavy heavy heavy heavy heavy heavy	heavy heavy heavy heavy heavy heavy heavy heavy heavy heavy heavy heavy heavy
		. н н н н д н н н н н н		,.
G2MS43 PH1494 C37267 C37267 PC1155 PA49982 JL0076 PH1499 P30502 A39276 A30577	A27472 8027472 804575 HVWSA1 PH0887 809216 MHMS38 717 838717 838717 HWS4E HE9380	S01321 PH1227 PE29380 F29380 S38950 S09957 JUO S38665 S25176 B53285	PH1520 H37266 S42176 PH19974 PH1520 PH15210 E37267 S55535 S55534 PH15114 PH1519	PHISO4 PHISO4 PHISO4 PHOSO3 PH
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1444444444	00000000000000	000000000000000000
	70000000000000000000000000000000000000	, C C C C C C T T T T T T T T T T T T T		11111111111111111111111111111111111111
864868884444	40000044444600	מטררר הממ א א א ש ש	000027700444000	iuuiioo
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		144000000000	00000000000000000	
2 . 2 2 . 3 3 4 4 4 4 4 6 9 4 4 6 9 4 6 9 6 9 6 9 6 9		. 4444488844748	4446444444686	44 4 4 4 4 444 44 4 4 4 4 444 44 4 4 4
0100000000000000000000000000000000000	. 4 4 4 4 4 4 W W W W W W W W W W W W W	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	69 77 77 77 77 80 80 80 80	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		*	•	•

```
A; Experimental source: cell line 4C11
A; Experimental source: cell line 4C11
C; Comment. This protein is an anti-idiotypic antibody that induces an anti-phosphorylchol C; Comment. This protein is an anti-idiotypic antibody that induces an anti-phosphorylchol C; Superfamily: immunoglobulin v region; immunoglobulin homology
C; Keywords: heterotetramer; immunoglobulin
C; Superfamily: immunoglobulin nequence #status predicted <SIG>F; 1-13/Domain: signal sequence #status predicted <SIG>F; 2-13/Product: Ig heavy chain homology <IMM>F; 2-14/Product: Ig heavy chain homology <IMM>F; 2-4/Region: complementarity-determining 1
F; 6-9-8/Region: complementarity-determining 2
F; 118-125/Region: complementarity-determining 3
F; 118-125/Region: Cregion (fragment) #status predicted <COR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ig heavy chain precursor V region (4C11) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCAR 117
                                                                                                                                                                                            Ig heavy chain precursor V region (108A) - mouse
C;Species: Mus musculus (house mouse)
C;Date: 18-Dec-1981 #sequence_revision 18-Dec-1981 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MGWSWIPLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                            A,Accession: A02041
A,Molecule type: DNA
A,Molecule type: DNA
A,Roldues: 1-117 <GIV>
A,Cross-references: UNIPROT.P01758; UNIPARC:UPI00000270F3
A,Cross-references: UNIPROT.P01758; UNIPARC:UPI00000270F3
A,Cross-references: UNIPROT.P01758; UNIPARC:UPI00000270F3
A,Note: the sequence was determined from the germline gene
C;Superfamily: immunoglobulin vegion; immunoglobulin homology
C;Reywords: heterotetramer; immunoglobulin
F;119/Domain: signal sequence #stetus predicted <MAT>
F;20-117/Product: Ig heavy chain vegion (108A) #status predicted <MAT>
F;34-117/Domain: immunoglobulin homology <IPM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Accession: A02041
R;Givol, D.; Zakut, R.; Effron, K.; Rechavi, G.; Ram, D.; Cohen, J.B.
Nature 292, 426-430, 1981
A;Title: Diversity of germ-line immunoglobulin V-H genes.
A;Reference number: A02041; MUID:81245215; PMID:6789211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Accession: PL0011
R;Cheng, H.L.; Sood, A.K.; Ward, R.B.; Kieber-Emmons, T.; Kohler, H. Mol. Immunol. 25, 33-40, 1988
A;Title: Structural basis of stimulatory anti-idiotypic antibodies. A;Reference number: PL0011; MUID:88142863; PMID:3125424
A;Accession: PL0011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 566.5; DB 2;
Pred. No. 1.9e-41;
9; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        76.4%; Score 579; DB 1; 92.3%; Pred. No. 1.2e-42; tive 3; Mismatches 6;
Query Match
Best Local Similarity 78.4%;
Matches 109; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 92.3 B; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 1-151 <CHE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Simines 108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                       Ig heavy chain precursor V region (129) - mouse C; Species: Mus musculus (house mouse) C; Species: Mus musculus (house mouse) C; Date: 15-Dec-1988 #sequence_revision 30-Jun-1991 #text_change 23-Jul-1999 C; Accession: A27609  
R; Accession: A27609  
B; XIehin, D.; Nietupski, J.; Sixlin, S.; Stavnezer, J. J. Immunol. 140, 1676-1684, 1988  
A; Title: 1.29 !umphoma cells express a nonmutated V-H gene before and after H chain swith A; Reference number: A27609; MUID:88154467; PMID:3126234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: UNIPARC:UPI0000114D5D; EMBL:M19401; NID:g195441; PIDN:AAA38303.1; PI
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H32513

19 heavy chain precursor V region (BXW16) - mouse
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 21-May-1990 #sequence_revision 31-Dec-1990 #text_change 21-Jan-2000
C;Accession: H32513 #sequence_revision 31-Dec-1990 #text_change 21-Jan-2000
C;Accession: H32513 #sequence_revision 31-Dec-1990 #text_change 21-Jan-2000
C;Accession: H32513 #s. jandaras, R.S.; Johnson, M.E.; Noonan, D.J.; Duchosal, M.A.;
J.Clin. Invest. 82, 852-860, 1988
A;Title: Immunoglobulin kappa light chain variable region gene complex organization and A;Reference number: A94689; MUID:88331394; PMID:3138286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: UNIPARC:UPI0000114D9A; GB:M20831; NID:g196949; PIDN:AAA38848.1; PID:C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MGWSWIFLFLLSVTAGVHSEIQLQQSGAELVKFGASVKISCKASGYSFTGYNMWWYKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C.Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-139/Product: Ig heavy chain V region I29 #status predicted <VAR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78.8%; Score 597; DB 2; Length 139; 80.6%; Pred. No. 4.3e-44; ive 10; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match

77.2%; Score 585; DB 2;
Best Local Similarity 80.6%; Pred. No. 4.4e-43;
Matches 112; Conservative 9; Mismatches 16;
             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Residues: 1-137 < KOF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Residues: 1-139 < KLE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Sim
Matches 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Introns: 16/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                          A27609
Ig heavy
```

g ò 셤

à 요 δ

ö

9 9 9

셤

ò 유 ò

Mon Mar

```
61 GOGLEWIGYINPGNGYTKYNEKFKGKTTLTVDKSSSTAYMQLRSLTSEDSAVYFCARSVY 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin F;34-117/Domain: immunoglobulin homology <IWM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Reference number: PH1482; MUID:93171820; PMID:8436910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 72.4%; Score 548.5; DB 2; Best Local Similarity 74.8%; Pred. No. 5.8e-40; Matches 104; Conservative 16; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 72.2%; Score 547.5; DB 2; Best Local Similarity 75.7%; Pred. No. 7.2e-40; Matches 106; Conservative 12; Mismatches 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A, Cross-references: UNIPARC:UP10000176BA2 A, Experimental source: hybridoma cell
                                  139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |::|||| |::||||
120 GNKWAMDYWGHGASVTVSS 138
                                                                                                                                                                                     Species: Mus musculus (house mouse)
          :
121 ATATLLDYWGQGTTLTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: translation not shown
A;Molecule type: mRNA
A;Residues: 1-140 <GIU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . Exp. Med. 177, 797-809, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Giusti, A.M.; Manser,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for somatic mutation
                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Accession: PH1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Introns: 16/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                             C;Accession: T01407
R;Takahashi, S.; Matsuura, Y.; Taniguchi, T.; Tamura, H.; Bitoh, S.; Onishi, S.; Yamamot Microbiol. Immunal. 36, 855-863, 1992
A;Title: Molecular analysis of immunoglobulin heavy chain genes coding for idiotypic and A;Reference number: Z14317; MUID:93116638; PMID:1474935
A;Accession: T01407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPARC:UP100002FB47; EMBL;X70423; NID:g406252; PIDN:CAA49868.1; Pl
C;Superfamily: immunoglobulin C region; immunoglobulin homology
C;Keywords: immunoglobulin
GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GKSLEWIGDINPNNGGTSYNQKFKGKATLTVDKSSSTAYMQLNSLTSEDSAVYYCAR-DY 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GOGLKWIGWIYPASGNIKYNENFKGKATLIVDISSSTAYMOLSSLISEDIAVYFCARAMG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MGWSWIFLFLLSGTAGVLSEVQLQQSGPELVKPGASVKMSCKASGYTFTDYYMKWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                 C;Species: Mus sp. (mouse)
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Jun-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Mus musculus (house mouse)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 23-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Residues: 1-140 <TAK>
A;Cross-references: UNIPARC:UP1000011B29B; EMBL:S51851; NID:g262657
C;Superfamily: immunoglobulin V region; immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2; Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      / Match 13.7%; Score 559; DB 2; Length 469; Local Similarity 75.5%; Pred. No. 2.8e-40; nes 105; Conservative 14; Mismatches 20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 565.5; DB 2; Length: Pred. No. 2.1e-41; B; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                submitted to the EMBL Data Library, February 1993
A;Reference number: S37483
A;Accession: S37483
A;Status: preliminary
                                                                                                                                                                                                                                                         heavy chain (myeloma M104E) - mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;276-345/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: translated from GB/EMBL/DDBJ
                                                                              GSGYYPDYWGQGTTLTVSS 139
                                                                                                              :||| || || || -- DWYFDVWGAGTTVTVSS 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 74.6%;
Best Local Similarity 79.9%;
Matches 111; Conservative E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Residues: 1-469 < DUC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Accession: S37483; Ducancel, F.F.D.
                                                                                                                              121
                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                            음
                                                                                                                   윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       윱
                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
```

```
R;Near, R.I.; Ng, S.C.; Mudgett-Hunter, M.; Hudson, N.W.; Margolies, M.N.; Seidman, J.G. Mol. Immunol. 27, 901-909, 1990
Mol. Immunol. 27, 901-909, 1990
A;Title: Heavy and light chain contributions to antigen binding in an anti-digoxin chain A;Reference number: PH0105; MUID:91015092; PMID:2120577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Reaidues: 1-138 <NEA>
A;Cross-references: UNIPARC:UPI0000115EC4; GB:X56622; GB:S44836; NID:g49875; PIDN:CAA399:
C;Superfamily: immunoglobulin V region; immunoglobulin homology
F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title: Hypermutation is observed only in antibody H chain V region transgenes that have
anti-digoxin transfectoma antibody light chain V region precursor - mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GKSLDYIGYISPYSGYTGYNQKPKGKATLTVDKSSSTAYMELRSLTSEDSAVYYCA-GSS 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GKILEWIGYIYPYNGVSDYNQNPKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCAR-WD 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MGWSWIFLFLISGTAGVLSEVQLQQSGPELVKPGASVRMSCKSSGYIFTDFYMNWVRQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSFIFLFLLSVTAGVHSEVQLQQSGAELVRAGSSVXMSCKASGYTFTSYGINWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                       .6-Jul-1999 #Bequence_revision 16-Jul-1999 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g heavy chain V region (clones 36-35[TG] and X7-TG) - mouse (fragment)
; Species: Mus musculus (house mouse)
; Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
; Accession: PH1482; PH1495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 140;
```

```
Joyany chain precursor V region (Mab 1G3) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 0.7May-1998 #sequence_revision 15-May-1998 #text_change 21-Jan-2000
C;Accession: 545249; 541429
R;Sassano M.; Repetto, M.; Cassani, G.; Corti, A.
R;Sassano M.; Repetto, M.; Cassani, G.; Corti, A.
A;Title: PCR amplification of antibody variable regions using primers that anneal to come A;Reference number: 545249; MUID:94261453; PMID:8202386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Residues: 26-76, TK', 79-118, 'V', 120-125,'Y', 127-134,'T', 136-140 <SIE>
A; Cross-references: UNIPARC: UP10000114D5B; GB:M19292; NID:g196201; PIDN:AAA38625.1; PID:
A; Cross-references: UNIPARC: UP10000114D5B; GB:M19292; NID:g196201; PIDN:AAA38625.1; PID:
A; Cross-references: UNIPARC: UP10000114D5B; GB:M19292; NID:g196201; PIDN:AAA38625.1; PID:
A; Note: the sequence was determined from the differentiated gene
A; Note: the sequence was determined from the differentiated genes that hybridize
A; Note: from analysis of the sizes of several other differentiated genes that hybridize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ig heavy chain precursor V region (93G7, 36-65) - mouse
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: IB-Ang-1982 #sequence_revision 18-Aug-1982 #text_change 09-Jul-2004
C;Accession: A94264; A91261; A02028
R;Sims, J.; Rabbitts, T.H.; Estess, P.; Slaughter, C.; Tucker, P.W.; Capra, J.D.
A;Title: Somatic mutation in genes for the variable portion of the immunoglobulin heavy A;Reference number: A94264; MUID:82152818; PMID:6801765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dominant anti-arsonate idiotype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIDN: CAA54447.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A.Cross-references: UNIPARC:UPI00001161D5; EMBL:X77230; NID:9452273; PIDN:CAA5447.1; A.Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1994 C.Superfamily: immunoglobulin V region; immunoglobulin homology
C.Skeywords: heteroterramer; immunoglobulin homology < C.Keywords: heteroterramer; immunoglobulin homology < IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Residues: 1-140 csIM.
A;Residues: 1-140 csIM.
A;Residues: 1-140 csIM.
A;Residues: 1-140 csIM.
A;Cross-references: UNIPROT:P01746; UNIPARC:UPI00000270DA; GB:J00493; NID:g195006; I
A;Experimental source: strain A/J, hybridoma 93G7
Bischevitz, M, Gefter, M.L.; Brodeur, P.; Riblet, R.; Marshak-Rothstein, A.
Bur. J. Immunol: 12, 1023-1032, 1982
A;Title: The genetic basis of antibody production: the dominant anti-arsonate idiot; A;Reference number: A91261; MUID:83131846; PMID:6186498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVXYCAR--- 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                61 GKSLEWIGDIDPNFDSSSYNQKFKGKATLTVDKSSNTAYMELRSLTSEDTAVYYCARGGF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MGWSWIFLFLESGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70.6%; Score 535.5; DB 2; Length 138; 72.4%; Pred. No. 7.5e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: S45249
A; Status: nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 VDTW------FPYWGQGTLVTVSA 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ---WDFGSGYYPDYWGQGTTLTVSS 139
                                                                                                                                                                                                            121 -- PYGMDYWGQGTSVTVSS 137
                                                                                                                                           121 GSGYYFDYWGQGTTLTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 70.6%;
Best Local Similarity 72.4%;
Matches 105; Conservative 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-138 < SAS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: A94264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                         셤
                                                                                                                                           à
                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    In heavy chain V region precursor - human (fragment)
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 30-59-1993 #sequence_revision 30-59-1993 #text_change 21-Jan-2000
C;Accession: PN0444
R;Kaluza, B.; Betzl, G.; Shao, H.; Diamantsein, T.; Weidle, U.H.
Gene 122, 321-328, 1992
A;Title: A general method for chimerization of monoclonal antibodies by inverse polymera
A;Reference number: PN0444; MUID:93138402; PMID:1339379
A;Accession: PN0444
A;Molecule type: mRNA
A;Residues: 1-150 cKAL>
A;Cross-references: UNIPARC:UP10000176A08; GB:L02346
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heteroterramer; immunoglobulin
C;Keywords: heteroterramer; immunoglobulin
C;Keywords: heteroterramer; immunoglobulin
F;1-19/Domain: signal sequence #status predicted <AIG>
F;20-117/Domain: variable region <VRG>
F;34-117/Domain: immunoglobulin homology <IMM>
F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: UNIPARC:UPI000011B257; GB:D00307; NID:g220448; PIDN:BAA00213.1; PID. A;Cross-references: UNIPARC:UPI000011B257; GB:D00307; NID:g220448; PIDN:BAA00213.1; PID. A;Note: the authors translated the codon AAG for residue 32 as Asn and GAC for 92 as Gly C;Comment: The gene encoding this protein was isolated from a hybridoma that produces an C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin C;Keywords: heterotetramer; immunoglobulin F:20-135/Product: Ig heavy chain V region PAR #status predicted <MAT> F:30-135/Product: Ig heavy chain V region PAR #status predicted <MAT>
                                                                                                                                                                               PSSULT 9
PS0057

PS0057

Ligh heavy chain precursor V region (PAR) - mouse

C;Species: Mus musculus (house mouse)

C;Date: 31-Mar-1990 #sequence_revision 31-Mar-1990 #text_change 20-Jun-2000

C;Accession: PS0057

R;Yaoite, Y.; Takahashi, M.; Azuma, C.; Kanai, Y.; Honjo, T.

J. Blochem. 104, 337-343, 1988

A;Title: Blased expression of variable region gene families of the immunoglobulin heavy

A;Reference number: PS0057; MUID:89197817; PMID:2467902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLLSVTAGVFSEVQLQQSGPELVKPGASVKISCKASGYSFTGYFMNWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     71.8%; Score 544; DB 2; Length 15
78.4%; Pred. No. 1.5e-39;
ive 4; Mismatches 24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72.2%; Score 547; DB 2; 77.0%; Pred. No. 7.7e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10; Mismatches
                                                                              121 YGGSYYFDYWGQGTTLTVSS 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RGA----YWGQGTLVTVSA 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 78.4's
Matches 109; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 77.0
Matches 107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Accession: PS0057
A,Molecule type: DNA
A,Residues: 1-135 <YAO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                 à
                                                                           g
```

PIDN

PII

```
R;Gjusti, A.M.; Manser, T.
J. Exp. Med. 177, 797-809, 1993
A;Title: Hypermutation is observed only in antibody H chain V region transgenes that hav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74 GKSLEWIGSTNPYIDYTNYKENFKGRATVTVDKSSSTVYMQLNSLTSEDSAVYYCAR-EG 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCAR-WD 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GOGLEWIGYINPGNDYIHYNEKPKGKTTLTVDKSSSTAYMQLRSLTSEDSAVYFCARSVY 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MGWSWIFLFLLSGTAGVHSBVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14 MGWSWIFLFLLSGTAGVLSQVQLQQSGPELAKPGASVKMSCKASGYRFTDYVMHWVKQSN 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Species: Mus musculus (house mouse)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
C;Accession: PH1484; PH1497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        - mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                  Length 166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                      F:131-140/Region: complementarity-determining 3 F:152-166/Domain: C region(fragment) #status predicted <COR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  number: PL0011; MUID:88142863; PMID:3125424
                                                                                                                                                                                                                                                                                                                                                                                                             70.0%; Score 530.5; DB 2; 72.7%; Pred. No. 2.4e-38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 69.3%; Score 525.5; DB 2; Best Local Similarity 73.6%; Pred. No. 5.4e-38; Matches 103; Conservative 13; Mismatches 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ig heavy chain V region (clones X7-3C5 and X7-3C5H)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 101; Conservative 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120 FGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133 GFGNSLDYWGQGTSVNVSS 151
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for somatic mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Introns: 16/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 GKILEWIGYIYPYNGVSDYNQNPKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWD- 119
                                                                                                                                                                                                                                                                                                                                                                                                                                         GKILEWIGYIYPYNGVSDYNQNPKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCAR-WD 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GOGLEWIGYINPGNGYIAYNEKFKGKTTLTVDKSSSTAYMQLRGLTSEDSAVHPCARSVY 120
                                                                                                                                                                                                                                                                                                                                                1 MGWSPIFLFLLSVTAGVHSEVQLQQSGAELVRAGSSVKMSCKASGYTFTSYGINWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MGWSFIFLELSVTAGVHSEVQLQQSGAELVRAGSSVKMSCKASGYTFTSYGMNWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ig heavy chain V region (clone X41-2) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
C;Accession: PH1489
R;Giusti, A.M., Manser. T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C,Species: Mus musculus (house mouse)
C;Species: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 21-Jan-2000
C;Accession: PL0012
R;Cheng, H.L.; Sood, A.K.; Ward, R.E.; Kieber-Emmons, T.; Kohler, H.
Mhol. Immunol. 25, 33-40, 1988
A;Title: Structural basis of stimulatory anti-idiotypic antibodies.
                                                                                                                                                                                                                                                                      Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapa
                      A;Introns: 16/1
S.Superfamily: immunoglobulin V region; immunoglobulin homology
C;Reywords: heterotetramer; hybridoma; immunoglobulin
C;Reywords: heterotetramer; hybridoma; immunoglobulin
P;1-19/Domain: signal sequence #status predicted <SIG>
P;20-104/Product: Ig heavy chain V region (93G7) #status predicted <MAT>
P;34-117/Domain: immunoglobulin homology <IWM>
F;41-115/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 70.1%; Score 531.5; DB 2; Length 140; Best Local Similarity 73.6%; Pred. No. 1.7e-38; Matches 103; Conservative 13; Mismatches 23; Indels 1
                                                                                                                                                                                                                      DB 1; Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Accession: PH1489
A;Status: translation not shown
A;Molecule type: mRNA
A;Residues: 1-140 «GIU»
A;Cross-references: UNIPARC:UPI0000176BA8
A;Experimental source: hybridoma cell
C;Superfamily: immunoglobulin v region; immunoglobulin homology
C;Keywords: heterocteramer; immunoglobulin
P;34-117/Domain: immunoglobulin homology «IMM»
                                                                                                                                                                                                                                                                      23; Indels

    mouse (fragment)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Reference number: PH1482; MUID:93171820; PMID:8436910
                                                                                                                                                                                                                   70.3%; Score 532.5; DB 1
74.3%; Pred. No. 1.4e-38;
iive 12; Mismatches 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ig heavy chain precursor V region (F6-3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120 FGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120 FGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 YGGSYDPDYWGQGTPLTVSS 140
                                                                                                                                                                                                                                                                      104; Conservative
                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 104; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

```
C;Accession: PH1498
R;Giusti, A.M.; Manser, T.
L. Exp. Med. 177, 797-809, 1993
A;Title: Hypermutation is observed only in antibody H chain V region transgenes that hav d for somatic mutation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Giusti, A.M.; Manser, T.
J. Exp. Med. 177, 797-809, 1993
A;Title: Hypermutation is observed only in antibody H chain V region transgenes that hav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCA-RWD 119
                                                                                                                                                                                                                                                                                                                                                                                                                GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCAR-WD 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                 1 MGWSFIFLFLLSVTAGVHSEVQLQQSGAELVRAGSSVKMSCKASGYTFTTYGINWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ig heavy chain V region (clones X7-5D3 and X7-5D3H) - mouse (fragment) C;Species: Mus musculus (house mouse) C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999 C;Accession: PH1483; PH1484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ig heavy chain V region (clone X7-4G7H) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSFIFLFLLSVTAGVHSEVQLQQSGAELVRAGSSVKMSCKASGYTFTSNGINWVKQRP
                                                                                                                                                                                                                                                                                             1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                         <del>.</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 140;
                                                                                                                                                                            Length 135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IndelB
                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;Reference number: PH1482; MUID:93171820; PMID:8436910
A;COSSE-references: UNIPARC:UPI0000176BA9
A;Experimental source: hybridoma cell
C;Superfamily: immunoglobulin V region; immunoglobulin ]
C;Keywords: heteroterramer; immunoglobulin
F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                   21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 1.5e-37
                                                                                                                                                                               Score 521.5; DB Pred. No. 1.2e-37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11; Mismatches
                                                                                                                                                                         Query Match
68.8%; Score 521.5; 1
Best Local Similarity 74.1%; Pred. No. 1.2e-
Matches 100; Conservative 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 520.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Superfamily: immunoglobulin V region; immunog
C;Keywords: heterotetramer; immunoglobulin
F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A, Cross-references: UNIPARC:UPI0000176BAB
A, Experimental source: hybridoma cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120 FGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68.7%;
ilarity 72.9%;
Conservative 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 YGGSÝÝFDÝWGQGŤŤ 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 FGSGYYFDYWGQGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 102; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Residues: 1-140 <GIU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;Accession: PH1498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Introns: 16/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C, Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                         염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 17
PH1493
Ig heavy chain V region (clone PR14-3) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
C;Accession: PH1493
R;Giusti, A.M.; Manser, T.
J. Exp. Med. 177, 797-809, 1993
R;Giusti, A.M.; Manser, T.
J. Exp. Med. 177, 797-809, 1993
A;Title: Hypermutation is observed only in antibody H chain V region transgenes that hav d for somatic mutation.
A;Reference number: PH1482; MUID:93171820; PMID:8436910
A;Accession: PH1493
A;Accession: PH1493
A;Molecule type: mRNA
                                                            Ig heavy chain precursor V region (B1-8) - mouse
N;Contains: Ig heavy chain precursor V region 186-2
C;Species Mus musculus (house mouse mouse c;Species Mus musculus (house mouse mouse c;Species C;Species Mus musculus (house mouse)
C;Species O2-Apr-1982 #sequence revision 02-Apr-1982 #text_change 09-Jul-2004
C;Accession: A90809; B90809; A22769; A02034; A02036
R;Bothwell, A.L.M.; Paskind, M.; Reth, M.; Imanishi-Kari, T.; Rajewsky, K.; Baltimore, I A;Title: Heavy chain variable region contribution to the NP(b) family of antibodies: som A;Reference number: A90809; MUID:81234548; PMID:6788376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-17 <1862.
A; Residues: 1-17 <1862.
A; Cross-references: UNIPARC: UPI000017372E
A; Note: the B1-8 mu chain mRNA was cloned from a hybridoma making antibodies to the hapt
A; Note: the 186-2 germline gene was cloned from a library of C57BL/6 DNA
B; Dildrop, R.; Bruggemann, M.; Radbruch, A.; Rajewsky, K.; Beyreuther, K.
BMBO J. 1, 635-640, 1982
A; Title: Immnoglobulin V region variants in hybridoma cells. II. Recombination between
A; Reference number: A90971; MUID:84236026; PMID:7188353
                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPROT:P01751; UNIPARC:UPI00000270EB; GB:J00529; NID:g195114; PIDN:
A;Accession: B90809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a spontaneous class switch vari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Introns: 16/1
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Superfamily: immunoglobulin
F;1-19/Domain: aignal sequence #status predicted <SIG>
F;20-139/Product: Ig Kappa chain V region (B1-8) #status experimental <MAT>
F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68.9%; Score 522; DB 1; Length 139; 71.9%; Pred. No. 1.1e-37; ... 12; Mismatches 27; Indels ... ive 12; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Molecule type: protein
A;Residues: 20-139 <DIL>
A;Cross-references: UNIPARC:UPI000002BD97
A;Note: the V region of the BI-8 delta chain, derived as of the mu chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 YGSSYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;125-139/Region: J segment (JH2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 71.9
Matches 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-139 <B18>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A, Accession: A22769
                                                                                                                                                                                                                                                                                                                                    A; Accession: A90809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
```

```
Glusti, A.M.; Manser, T.
Exp. Med. 177, 797-809, 1993
Title: Hypermutation is observed only in antibody H chain V region transgenes that hav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSITSEDSAVYYCAR-WD 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GOGLEWIGYIHPGKGYIHYSEKFKDKTTLTVDKSSTAYMQLRSLTSEDSAVYLCARSVY 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCAR-WD 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSFIFLELLSVIAGVHSEVQLQQSGVEQVRTGSSVKMSCKASGYTFTSYGINWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSFIFLFLILSVTAGVHSEVQLQQPGAELVRAGSSVKMSCKASGYTFTTYGMNWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Mus musculus (house mouse)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                       DB 2; Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 140;
                                                                                                                                                                                                                A;Introns: 16/1
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heteroterramer; immunoglobulin
F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Residues: 1-140 <GIU>
A;Cross-references: UNIPARC:UPI0000176BA7
A;Experimental source: hybridoma cell
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;34-117/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23; Indels
                                                                                                                                                                                                                                                                                                                                                                                    25, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    heavy chain V region (clone X41-1) - mouse (fragment)
pecies: Mus musculus (house mouse)
r somatic mutation.
ference number: PH1482; MUID:93171820; PMID:8436910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for somatic mutation. Reference number: PH1482; MUID:93171820; PMID:8436910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                           .5e-37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 520.5; DB 2
Pred. No. 1.5e-37;
                                                                                                                                                                                                                                                                                                                                    68.7%; Score 520.5;
72.9%; Pred. No. 1.5e
:ive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Search completed: March 20, 2006, 07:36:25 Job time : 5.07199 seca
                                                                                                         A,Residues: 1-140 cGUU>
A,Cross-references: UNIPARC:UPI0000176BA3
A,Experimental source: hybridoma cell
C,Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 FGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120 PGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68.7%;
71.4%;
                                             Accession: PH1483
Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 100; Conserva
                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Simi
Matches 102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

THIS PAGE BLANK (USPTO)

Appli Appli Appl Appl Appl

Sequence Seq

Sequence Sequence Sequence Sequence Sequence Sequence Sequence

Run ž

```
US-11-226-325-36
US-11-107-648-31
US-11-177-648-31
US-10-932-334-74
US-11-102-743-7
US-11-102-743-7
US-11-226-325-38
US-11-26-325-98
US-11-26-325-98
US-11-177-648-96
                                                                                                                                                                                                                                                                                                                                                                                         455.5
455.5
455.5
454.5
454.5
 Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
                                                                                             March 20, 2006, 07:32:13 ; Search time 2.60454 Seconds (without alignments) 1527.558 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                          US-10-687-035-34
758
1 MGMSWIFLFLLSGTAGVHSB......FGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                Published Applications AA New:*

1: /cgn2_6/ptodata/2/pubpaa/USO8_NEW_PUB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/USO8_NEW_PUB.pep:*
3: /cgn2_6/ptodata/2/pubpaa/USO7_NEW_PUB.pep:*
4: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
5: /cgn2_6/ptodata/2/pubpaa/USO7_NEW_PUB.pep:*
6: /cgn2_6/ptodata/2/pubpaa/USO1_NEW_PUB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/USO1_NEW_PUB.pep:*
8: /cgn2_6/ptodata/2/pubpaa/USO1_NEW_PUB.pep:*
              GenCore version 5.1.7
(c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-504-389A-28
US-11-125-313-39
US-11-125-312-22
US-11-139-512-27
US-10-016-686-4
US-11-10-939-10
US-11-116-939-11
US-11-116-939-11
US-11-116-939-11
US-11-116-939-11
US-11-116-939-11
US-11-116-939-11
US-11-116-939-11
US-11-190-512-74
US-11-190-512-74
US-11-190-512-74
US-11-190-512-74
US-11-190-512-83
US-11-190-512-83
US-11-190-512-83
US-11-190-512-83
                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-016-686-3
US-11-177-648-30
US-11-177-648-33
                                                                                                                                                                                                                                                                  169630 segs, 28622889 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                       Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries
                                                                    protein search, using sw model
                                                                                                                                                                                                                     BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74177

74
                                                                                                                                                                                                                                                                                                                                                                           Post-processing:
                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                       F
                                                                      protein
                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                   ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
No.
```

Sequence Sequence Sequence Sequence

Sequence Sequence Sequence

Sequence Sequence Sequence Sequence

Sequence Sequence Sequence Sequence Sequence Sequence Sequence

Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence

Sequence 3 Sequence 6 Sequence 6

Sequence Seq

```
61 GKILEWIGYIYPYNGVSDYNQNPKSKATLIVDNSSNTAYMELRSLISEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLICANT: KOIKE, maccomm.
PURUTA, Akiko
NAKAMURA, Kazuyasu
IIDA, Akihiro
ANAZAWA, Hideharu
HANAI, Nobuo
TAKATSU, Kiyoshi
TITLE OF INVENTION: Antibody Against Human Interleukin-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 543.5; DB 7; Length 138; Pred. No. 2.7e-38; 7; Mismatches 22; Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Pennie & Edmonds LLP
STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                  Sequence 22, 2, Application US/11125837

Publication No. US20050266003A1

GENERAL INFORMATION:
APPLICANT: Lin, Rong-Hwa
APPLICANT: Chang, Chung Nan
APPLICANT: Chen, Pei-Jun
APPLICANT: Hang, Chiu-Chen
TITLE OF INVENTION: ANTHODIES
FILE REFERENCE: 13062-011001
CURRENT APPLICATION NUMBER: US/11/125,837
CURRENT APPLICATION NUMBER: US 60/569,892
PRIOR PILING DATE: 2005-05-10
PRIOR PILING DATE: 2004-05-10
NUMBER OF SEQ ID NOS: 100
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence 27, Application US/11193512; Publication No. US20050272918A1; GENERI INFORMATION: APPLICANT: KOIKE, Masamichi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 GSGYY-FDYWGOGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119 GSPYYRYDDWGQGTTLTVSS 138
                                                                                                121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                        121 YGG--MDYWGQGTSVTVSS 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 77.1%;
Matches 108; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: NY
COUNTRY: USA
ZIP: 10036
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; LENGTH: 138
; TYPE: PRT
; ORGANISM: Mus musculus
US-11-125-837-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-11-193-512-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                셤
                                                                                                  ઠે
                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Publication No. US20060024302A1

Publication No. US20060024302A1

GENERAL INFORMATION:

GENERAL INFORMATION:

TITLE OF INVENTION: CHIMERIC ANTI-VEGF-D ANTIBODIES AND HUMANIZED ANTI-VEGF-D ANTIBODIES TITLE OF INVENTION: AND METHODS OF USING SAME
TITLE REFERENCE: 28967A39969A

CURRENT APPLICATION NUMBER: US/11/074,373

CURRENT PILING DATE: 2005-03-07

NUMBER OF SEQ ID NOS: 52

SOFTWARE: Patentin version 3.2

SEQ ID NO 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; FEATURE:
; OTHER INFORMATION: amino acid sequence for murine 19/2 heavy chain variable region
US-10-504-389A-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66 WIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDFGSGYY 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64 WIGYIAPYSGGTGYNQEFKNRATLTVDKSSSTAYMELRSLTSDDSAVYYCARRD--RFPY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 IFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSHGKILE 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 IMLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSHGKSLD 63
Sequence 136, App
Sequence 145, App
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLESGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                      APPLICANT: Renner, Christoph
APPLICANT: Scott, Andrew
TITLE OF INVENTION: FUSION PROTEINS OF HUMANIZED G250 SPECIFIC
TITLE OF INVENTION: ANTIBODIES AND USES THEREOF
FILE REFERENCE: LUD 5821
CURRENT APPLICATION NUMBER: US/10/504,389A
CURRENT FILING DATE: 2004-08-10
PRIOR PILING DATE: 2002-02-12
NUMBER OF SEQ ID NOS: 56
SEQ ID NO 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 76.1%; Score 577; DB 6; Length 139; Best Local Similarity 83.6%; Pred. No. 4.7e-41; Matches 112; Conservative 7; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 7; Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74.1%; Score 562; DB 7; 74.8%; Pred. No. 8e-40; tive 15; Mismatches 1
US-11-097-812-136
US-11-097-812-145
                                                                                     ALIGNMENTS
                                                                                                                                                                    US-10-504-389A-28
Sequence 28, Application US/10504389A
Publication No. US20060045876A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             126 FDYWGOGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122 FDYWGQGTTLRVSS 135
  ~ ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 74.89
Matches 104; Conservative
  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Mus musculus
  60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-11-074-373-39
  454.5
454.5
  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
) ORGANISM: Artificial Sequence

) FEATURE:

) OTHER INFORMATION: deduced amino acid sequence for the Ig-574 fusion proteins-10-016-686-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/11250411
                                                                                                                                                                                                                                                                                                                                                                                                                         121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      118 DGDYYPDYWGQGTTLTVSS 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                        Query Match 70.7%;
Best Local Similarity 74.8%;
Matches 104; Conservative
                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Გ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GOGLAWIGYINPYNDGTKYNERPKGKATLTSDRSSSTVYMELSSLTSEDSAVYLCGR--E 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEWSWIFLFFLLSGTAGVHSEVQLQQSGPELVKPGASVKMSCKASGYTFTSYVIHWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 537.5; DB 7
Pred. No. 8.5e-38;
5; Mismatches 24
                                                                                                                                                                                                                                                                                                                                                                                             NAME: Lawrence, III, Stanton T
REGISTRATION WUMBER: 25,736
REFERENCE/DOCKET NUMBER: 7005-115-999
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/10/283,349
FILING DATE: 29-Oct-2002
APPLICATION NUMBER: US/08/836,561
FILING DATE: 09-MAY-1997
APPLICATION NUMBER: JP 232384/95
PILING DATE: 11-SEP-1995
ATTORNEY/AGENT INFORMATION:
                                        OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/11/193,512
FILING DATE: 01-Aug-2005
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Kingsman, Alan
APPLICANT: Kingsman, Susan Mary
APPLICANT: Bebbington, Christopher Robert
APPLICANT: Carrol, Miles William
APPLICANT: Bland, Flona Margaret
APPLICANT: Bland, Flona Margaret
APPLICANT: Myers, Kevin Alan
TITLE OF INVENTION: Antibodies
FILE REFERENCE: 674523-2012
CURRENT APPLICATION NUMBER: US/10/016,686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear

HOLECULE TYPE: peptide

SEQUENCE DESCRIPTION: SEQ ID NO: 27:
US-11-193-512-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: PCT/GB00/04317
PRIOR FILING DATE: 2000-11-13
NUMBER OF SEQ ID NOS: 37
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4, Application US/10016686
Usblication No. US20060014222A1
GENERAL INFORMATION:
APPLICANT: Oxford Biomedica (UK) Limited
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GSGYY---FDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119 GIRYYGLLGDYWGQGTTLTVSS 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 140 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 212-869-9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 76.1%;
Matches 108; Conservative E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO: 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

```
61 GKSLEWIGRINPNNGVTLYNQKFKDKAILTVDKSSTTAYMBLRSLTSEDSAVYYCARSTM 120
                                                                                                                                                                                                                                                                                                      61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                             1 MGWSCIILFLVATATGVHSEVQLQQSGPDLVKPGASVKISCKASGYSFTGYYMHWVKQSH 60
                                                                                                                                                   1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MGRSRIFLFLISVTTGVHSQAFLQQSGARLVRPGASVKMSCKASGYTFINYNMHWVKQTP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Description of Artificial Sequence: Synthetic protein US-11-250-411-88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 68.4%; Score 518.5; DB 7; Length 136; Best Local Similarity 72.7%; Pred. No. 3.1e-36; Matches 101; Conservative 13; Mismatches 22; Indels 3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: NAKAMURA, KAZUYASU
APPLICANT: SHIBUYA, MASABUMI
TITLE OF INVENTION: ANTI-HUMAN VEGF RECEPTOR FLT-1 MONOCLONAL ANTIBODY
FILE REFERENCE: 249-107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 ROGLEWIGAIFPGNGFTSYNOKFKGKATLTVDKSSSTVYMOLRSLTSEDSAVYFCAR
                                                                             26; Indels
Score 536; DB 6;
Pred. No. 4.2e-37;
9; Mismatches 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/11/250,411
CURRENT FILING DATE: 2005-10-17
PRIOR APPLICATION NUMBER: US/09/453,718
PRIOR FILING DATE: 1999-12-03
PRIOR PILING DATE: 1999-05-20
PRIOR APPLICATION NUMBER: 09/315,051
PRIOR APPLICATION NUMBER: 09/19,014
PRIOR PILING DATE: 1999-05-20
PRIOR PILING DATE: 1999-11-21
NUMBER OF SEQ ID NOS: 111
SOFTWARE: PERCENTING DATE: 1997-11-21
NUMBER OF SEQ ID NOS: 111
SOFTWARE: PERCENTIN OF: 2.1
```

:|| | | |||||:|||||| 271 YGSSPPYYAMDCWGQGTSVTVSS 293

```
Sequence 11, Application US/11116939

Sequence 11, Application US/11116939

Publication No. US2005056595A1

GENERAL INFORMATION:

APPLICANT: Stephen Tomlinson

APPLICANT: Richard J. Quisg

TITLE OF INVENTION: TISSUE TARGETED COMPLEMENT MODULATORS

FILE REFERENCE: 19113.011501

CURRENT APPLICATION NUMBER: US/11/116,939

CURRENT FILING DATE: 2004-04-28

NUMBER OF SEQ ID NOS: 27

SOFTWARE: PASISEQ for Windows Version 4.0

SEQ ID NO 11

LENGTH: 824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
67.7%; Score 513; DB 7; Length 824;
Best Local Similarity 69.9%; Pred. No. 4.4e-35;
Matches 100; Conservative 12; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
67.7%; Score 513; DB 7; Length 412;
Best Local Similarity 69.9%; Pred. No. 2.4e-35;
Matches 100; Conservative 12; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120 FGSG---YYFDYWGOGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -11-116-939-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCAR-WD 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWD- 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPBLVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MGWSWIFFFLLSGTAGVHCQVQLKQSGAELVRPGASVKLSCKASGYTFTDYYINWVKQRP 60
                                                                      APPLICANT: Das, Anuk
APPLICANT: Carten, Jill
APPLICANT: Carten, Jill
APPLICANT: Tsui, Ping
TITLE OF INVENTION: ANTI-MCP1 ANTIBODIES, COMPOSITIONS, METHODS AND USES
TITLE OF INVENTION: ANTI-MCP1 ANTIBODIES, COMPOSITIONS, METHODS AND USES
CURRENT APPLICATION NUMBER: US/11/170,453
CURRENT FILING DATE: 2005-06-29
WUMBER OF SEQ ID NOS: 17
SOFTWARE: Patentin version 3.3
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Description of Artificial Sequence; note=synthetic; OTHER INFORMATION: CONStruct
US-11-116-939-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 7; Length 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 67.7%; Score 513; DB 7; Length 293; Best Local Similarity 69.9%; Pred. No. 1.7e-35; Matches 100; Conservative 12; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-11-116-939-10

Sequence 10, Application US/11116939

Publication No. US2005026595A1

GENERAL INFORMATION:
APPLICANT: Stephen Tomlinson
APPLICANT: Stephen Tomlinson
FILE REPERENCE: 19113.0115U2
CURRENT APPLICATION NUMBER: US/11/116,939
CURRENT FILING DATE: 2005-04-28
PRIOR APPLICATION NUMBER: 60/565,907
PRIOR FILING DATE: 2004-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 68.4%; Score 518.5; DB 7; Length Best Local Similarity 70.4%; Pred. No. 3.2e-36; Matches 100; Conservative 15; Mismatches 24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 27
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 10
LENGTH: 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120 FGSG---YYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |: | |||||||::|||||
121 TVVGNYYGMDYWGQGTSVTVSS 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --FGSGYYFDYWGQGTTLTVSS 139
Sequence 7, Application US/11170453 Publication No. US20060039913A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                    , ORGANISM: Mus sp.
US-11-170-453-7
                                                                                                                                                                                                                                                                                                                       142
                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
```

```
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              211 AKSLEWIGVISTYYGHTHYNQKFKGKATLIVDKSSNTAYMELARLISEDSAIYYCARPNN 270
US-11-116-939-12

i Sequence 12, Application US/11116939
i Sequence 12, Application US/11116939
i Publication No. US20050265995A1
i GENERAL INFORMATION:
i APPLICANT: Stephen Tomlinson
APPLICANT: Stephen Tomlinson
APPLICANT: Richard J. Quigg
i TITLE OF INVENTION: IISSUE TARGETED COMPLEMENT MODULATORS
i TITLE OF INVENTION UNMBER: US/11/116,939
CURRENT FILING DATE: 2005-04-28
i PRIOR APPLICATION NUMBER: 60/565,907
i RIOR PILING DATE: 2004-04-28
i PRIOR PILING DATE: 2004-04-28
i PRIOR PILING DATE: 2004-04-28
i PRIOR APPLICATION NUMBER: 60/565,907
i SEQ ID NO 12
LENGTH: 412
i TYPE: PRI
COGNISM: Artificial Sequence
FEATURE:
i OTHER INFORMATION: CONSTINCT
US-11-116-939-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCAR-WD 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Description of Artificial Sequence; note=synthetic; OTHER INFORMATION: construct
US-11-116-939-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 ;
```

셤 ò 셤

ð

```
1 MEWSWIFLFFLLSGTAGVHSEVQLVQSGAEVKKPGASVKVSCKASGYTFTSYVIHWVRQAP 60
                                                                                                        61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                      61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFURMATION:
APPLICANT: SHITARA, KENYA
APPLICANT: TIO, MIKITO
APPLICANT: TWANDA, YOKO
APPLICANT: KAWADA, YOKO
APPLICANT: KAWADA, YOKO
APPLICANT: KAWADA, YOKO
APPLICANT: KAWADA, YOKO
APPLICANT: SHIBUYA, WASABUMI
ITILE OF INVENTION: ANTI-HUMAN VEGF RECEPTOR FLT-1 MONOCLONAL ANTIBODY
FILE REFERENCE: 249-10.7
CURRENT APPLICATION NUMBER: US/11/250,411
CURRENT FILING DATE: 1999-12-03
PRIOR APPLICATION NUMBER: 09/315,051
PRIOR PLLING DATE: 1999-12-03
PRIOR FILING DATE: 1999-07-20
PRIOR PLLING DATE: 1999-07-20
PRIOR APPLICATION NUMBER: 09/119,014
PRIOR FILING DATE: 1999-07-20
PRIOR APPLICATION NUMBER: 09/119,014
PRIOR FILING DATE: 1999-07-20
PRIOR APPLICATION NUMBER: PCT/JU997/04259
PRIOR PLLING DATE: 1997-11-21
NUMBER OF SEQ ID NOS: 111
SOFTWARE: PATENTIN VET: 2.1
SEQ ID NO 91
LENGTH: 136
FWORF: DEPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MGFSRIFLFLLSVTTGVHSQVQLVQSGAEVKKPGASVKVSCKASGYTFINYNMHWVRQAP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: Description of Artificial Sequence: Synthetic protein US-11-250-411-91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 65.5%; Score 496.5; DB 7; Best Local Similarity 67.6%; Pred. No. 2e-34; Matches 94; Conservative 18; Mismatches 24;
                                                                                                                                                                                                          121 GSGYY---FDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                              119 GIRYYGLLGDYWGQGTLVTVSS 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              equence 95, Application US/11250411
ublication No. US20060034838A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118 DGDYYFDYWGQGTLVTVSS 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial Sequence FEATURE:
                                                                                                        8
                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                      211 AKSLEWIGVISTYYGHTHYNOKFKGKATLIVDKSSNTAYMELARLISEDSAIYYCARPNN 270
                                              151 MGWSCVMLFLVATATGVHSQVQLEQSGPELVRPGVSVKISCKGSGYTFTDYAIHWVKQSH 210
                                                                                                        61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCAR-WD 119
1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HANNI, Nobuo
TAKATSU, Kiyoshi
TITLE OF INVENTION: Antibody Against Human Interleukin-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66.7%; Score 505.5; DB 7;
69.0%; Pred. No. 3.7e-35;
ive 14; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Lawrence, III, Stanton T
REGISTRATION NUMBER: 25,736
REFERENCE/DOCKET NUMBER: 7005-115-999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Receptor Alpha Chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Pennie & Edmonds LLP
STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/11/193,512
FILING DATE: 01-Aug-2005
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/10/283,349
FILING DATE: 29-Oct-2002
APPLICATION NUMBER: US/08/836,561
FILING DATE: 09-MAX-1997
APPLICATION NUMBER: UP 232384/95
FILING DATE: 11-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 63:
JS-11-193-512-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FARESEQ Version 2.0
                                                                                                                                                                                                                                        120 FGSG---YYPDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                            Sequence 63, Application US/11193512
Publication No. US20050272918A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FURUYA, Akiko
NAKAMURA, Kazuyasu
IIDA, Akihiro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ANAZAWA, Hideharu
                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: KOIKE, Masamichi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 212-869-9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: 66141 PENNIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 10036
COMPUTER READABLE FORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 69.04
Matches 98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: New York STATE: NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                      -11-193-512-63
```

```
TELEFAX: 212-869-9741
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 68.6%
Matches 96; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
                                                                                                                                                                                                                                                           ; TYPE: PRT
; ORGANISM: Mus musculus
US-11-183-205-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 10036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-193-512-74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ## APPLICANT: SHIBUYA, MASABUMI
## TITLE OF INVENTION: ANTI-HUMAN VEGF RECEPTOR FLT-1 MONOCLONAL ANTIBODY
## FILE REFERENCE: 249-107
## CURRENT APPLICATION NUMBER: US/11/250,411
## CURRENT PILING DATE: 2005-10-17
## PRIOR APPLICATION NUMBER: US/09/453,718
## PRIOR APPLICATION NUMBER: 09/315,051
## PRIOR FILING DATE: 1999-12-03
## PRIOR FILING DATE: 1999-07-20
## PRIOR FILING DATE: 1999-07-20
## PRIOR PELICATION NUMBER: PCT/JP97/04259
## PRIOR APPLICATION NUMBER: PCT/JP97/04259
## PRIOR APPLICATION NUMBER: PCT/JP97/04259
## PRIOR APPLICATION NUMBER: PCT/JP97/04259
## PRIOR PILING DATE: 1997-11-21
## NUMBER OF SEQ ID NOS: 111
## SCOFTWARE: Patentin Ver. 2.1
## SEQ ID NOS: 111
## SCOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Description of Artificial Sequence: Synthetic protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: NGOSE 'LECANDOLOGIES, INC.
APPLICANT: NGOSE 'LECANDOLOGIES, INC.
APPLICANT: SOPÉ, David
APPLICANT: BAYET, RODERT
APPLICANT: BAYET, RODERT
APPLICANT: BAYET, RODERT
APPLICANT: Chen, Xi
APPLICANT: Chen, Xi
APPLICANT: Chen, Xi
TITLE OF INVENTION: REMODELING AND GLYCOCONJUGATION OF PEPTIDES
FILE REFERENCE: 040853-01-5052-US01
CURRENT PEPLICATION NUMBER: US/11/183,205
PRIOR APPLICATION NUMBER: US 60/334,233
PRIOR FILING DATE: 2005-07-15
PRIOR APPLICATION NUMBER: US 60/334,301
PRIOR PILING DATE: 2001-11-28
PRIOR PILING DATE: 2002-06-07
PRIOR PILING DATE: 2002-06-07
PRIOR PILING DATE: 2002-06-07
PRIOR PILING DATE: 2002-06-07
PRIOR PILING DATE: 2002-06-05
PRIOR PILING DATE: 2002-06-05
PRIOR PILING DATE: 2002-06-05
PRIOR PILING DATE: 2002-06-05
PRIOR PILING DATE: 2002-06-05
PRIOR PILING DATE: 2002-06-05
PRIOR PILING DATE: 2002-06-05
PRIOR FILING DATE: 2002-06-06
PRIOR FILING DATE: 2002-08-06
PRIOR FILING DATE: 2002-08-06
PRIOR FILING DATE: 2002-08-06
PRIOR PILING DATE: 2002-08-06
PRIOR FILING DATE: 2002-08-06
PRIOR FILING DATE: 2002-08-06
PRIOR FILING DATE: 2002-08-06
PRIOR FILING DATE: 2002-08-06
PRIOR PILING DATE: 2002-08-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65.4%; Score 495.5; DB 7; Length 136; 66.9%; Pred. No. 2.4e-34; Live 20; Mismatches 23; Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 62, Application US/11183205
Publication No. US20060030521A1
GENERAL INFORMATION:
APPLICANT: Neose Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 66.9
Matches 93; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-11-183-205-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-11-250-411-95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWD- 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GRGLEWIGALYPGNGDTSYNQXFXGXATLTADXSSSTAYMQLSSLTSEDSAVYYCARSTY 120
                                                                                                                                                                                                                                                                                                                                                                                                                          1 MGWSLILLFLVAVATRVLSQVQLQQPGAELVKPGASVKMSCKASGYTFTSYNMFWVKQTP 60
                                                                                                                                                                                                                                                                                                                                                                                       1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT: KOLAG, MACHO
FURUYA, Akiko
NAKAMURA, Kazuyasu
IIDA, Akihiro
ANAZAWA, Hideharu
HANAI, Nobuo
TAKATSU, Kiyoshi
TITLE OF INVENTION: Antibody Against Human Interleukin-5
Receptor Alpha Chain
                                                                                                                                                                                                                                                                                       Length 140;
                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                 65.2%; Score 494.5; DB 7;
68.6%; Pred. No. 3e-34;
tive 15; Mismatches 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Lawrence, III, Stanton T
REGISTRATION NUMBER: 25,736
REFERENCE/DOCKET NUMBER: 7005-115-999
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/11/193,512
FILING DATE: 01-A02-2005
CLASSIFICATION: «Unknown»
PRIOR APPLICATION NUMBER: US/08/836,561
FILING DATE: 29-Oct-2002
APPLICATION NUMBER: US/08/836,561
FILING DATE: 09-MX-1997
APPLICATION NUMBER: US/232384/95
FILING DATE: 11-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Pennie & Edmonds LLP
STREET: 1155 Avenue of the Americas
CITY: New York
PRIOR FILING DATE: 2002-10-09
PRIOR PEDLICATION NUMBER: US 10/287,994
PRIOR FILING DATE: 2002-11-05
NUMBER OF SEQ ID NOS: 62
SOFTWARE: Patentin version 3.1
SEQ ID NO 62
LENGTH: 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 74, Application US/11193512
Publication No. US20050272918A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    :| :||: || ||||||:
121 YGGDWYFNVWGAGTTVTVSA 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 FGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
```

IIDA, Akihiro ANAZAWA, Hideharu

KOIKE, Masamichi

```
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: amino acid sequence for murine heavy chain variable region US-10-504-389A-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GOGLEWMGYINPYNDGTKYNERFKGRVTITADTSTSTAYMELSSLRSEDTAVYLCGR--E 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 QRPGHDLEWIGYINPSSGYSDYNQSFKGKTTLTADKSSNTAYMQLNSLTSEDSAVYYCAR 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58 QSHGKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCA- 116
                                                                                                                                                                                                                                                                                                                                                                                                            1 MEMSWIFLFLLSGTAGVHSEVQLVQSGAEVKKPGASVKVSCKASGYTFTSYVIHWVRQAP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MNWIWIVFCLLAVAPGAHSAMAQVQLQQSGAELARPGASVKMSCKASGYIFITYTIHWVR 60
                                                                                                                                                                                                                                                                                                                                                                               1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MGWSWIFLFLLSGTAGVHS----EVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVK
                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                     .,
2
                                                                                                                                                                                                                                                                                   Length 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Renner, Christoph
APPLICANT: Scott, Andrew
TITLE OF INVENTION: FUSION PROTEINS OF HUMANIZED G250 SPECIFIC
TITLE OF INVENTION: ANTIBODIES AND USES THEREOF
FILE REFERENCE: LUD 582.1
CURRENT APPLICATION NUMBER: US/10/504,389A
PRIOR APPLICATION NUMBER: PCT/US03/04243
PRIOR APPLICATION NUMBER: PCT/US03/04243
PRIOR FILING DATE: 2002-02-12
NUMBER OF SEQ ID NOS: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; DB 6; Length 145; 1.1e-33;
                                                                                                                                                                                                                                                                                                                                  27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30; Indels
                                                                                                                                                                                                                                                                           Query Match 65.1%; Score 493.5; DB 7
Best Local Similarity 67.6%; Pred. No. 3.6e-34;
Matches 96; Conservative 14; Mismatches 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 66.9%; Pred. No. 1.1e
Matches 97; Conservative 12; Mismatches
                                                                                                                                                                          MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 74:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           117 RWDFGSGYY--FDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 GSGYY---FDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GIRYYGLLGDYWGQGTLVTVSS 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 45, Application US/10504389A
Publication No. US20060045876Al
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 78, Application US/11193512
Publication No. US20050272918A1
                                                                              LENGTH: 140 amino acids
                                                                                                      TYPE: amino acid
STRANDEDNESS: single
TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO: 74
                                                    SEQUENCE CHARACTERISTICS
                                                                                                                                                        TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Mus musculus
                                                                                                                                                                                                                            US-11-193-512-74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 45
LENGTH: 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GOGLAWMGYINPYNDGTKYNERFKGRVTITADRSTSTAYMELSSLRSEDTAVYLCGR--E 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MEWSWIFLFLLSGTAGVHSEVQLVQSGAEVKKPGASVKVSCKASGYTFTSYVIHWVRQAP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 140;
HANAI, Nobuo
TAKATSU, Kiyoshi
TITLE OF INVENTION: Antibody Against Human Interleukin-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Lawrence, III, Stanton T
REGIGTRATION NUMBER: 25,736
REFERENCE/DOCKET NUMBER: 7005-115-999
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-790-9090
                                                                                                                                                                      STREET: 1155 Avenue of the Americas CITY: New York STATE: NY
                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: PERISEQ Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/11/193,512
FILING DATE: 01-Aug-2005
CLASSIPICATION: -UNKNOWN>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/10/283,349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 29-Oct-2002
APPLICATION NUMBER: US/08/08/05.561
FILING DATE: 09-MAY-1997
APPLICATION NUMBER: UP 232384/95
FILING DATE: 11-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64.3%; Score 487.5; 66.9%; Pred. No. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GSGYY---FDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119 GIRYYGLLGDYWGQGTLVTVSS 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 212-869-9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: single
                                                                                                                                                                                                                                                                                      UTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 66.9
95; Conservative
                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-11-193-512-78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 95
                                                                                                                                                                                                                                                                                                COMPL
```

```
118 GQG----YWGQGTLVTVSS 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 212-869-9741
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 83:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63.7%;
      121 GSGYYFDYWGQGTTLTVSS
                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
ZIP: 10036
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: New York
STATE: NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 95; Conserva
                                                                                                                             US-11-193-512-83
                                                                                                          RESULT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ਨੇ
                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSCIILFLVAAATGVHSQVQLQQPGTELVKPGASVKLSCKASGYTFTSYWMHWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARW-- 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MGWSYIILFLVATATEVHSQVQLQQSGAELVKPGASVKLSCKASGYTFTSYWMHWVKQRP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                     4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 462;
                                                                                                                                                                                                                                                                                                                                                    ; Score 487; DB 6; Length 143; ; Pred. No. 1.3e-33; 15; Mismatches 26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 7;
APPLICANT: ImmunoGen, Inc.
TITLE OF INVENTION: ANTI-IGF-I RECEPTOR ANTIBODY
FILE REPERENCE: A6689
CURRENT APPLICATION NUMBER: US/10/932,334
CURRENT FILING DATE: 2004-09-02
PRIOR APPLICATION NUMBER: US/10/729,441
PRIOR APPLICATION NUMBER: 10/170,390
PRIOR PILING DATE: 2003-12-08
NUMBER OF SEQ ID NOS: 96
SOFTWARE: PatentIn version 3.2
SEQ ID NO 52
LENGTH: 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Pred. No. 4.8e-33; 13; Mismatches 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: PAUL Andrew HAMBLIN
APPLICANT: Paul Alexander WILSON
APPLICANT: Paul Alexander WILSON
APPLICANT: Alan Peter LEWIS
TITLE OF INVENTION: IMMUNOGLOBULINS
FILE REFERENCE: PB60608-2
CURRENT APPLICATION NUMBER: US/11/177,648
CURRENT FILING DATE: 2005-07-06
PRIOR APPLICATION NUMBER: PCT/GB2004/005325
PRIOR FILING DATE: 2004-12-22
PRIOR FILING DATE: 2003-12-22
PRIOR FILING DATE: 2003-12-22
PRIOR FILING DATE: 2003-12-22
NUMBER OF SEC ID NOS: 113
SOFTWARE: PSECSE for Windows Version 4.0
SEC ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64.1%; Score 485.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 DYYGSSKWYFDVWGAGTTVTVSS 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            119 DF--GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 9, Application US/11177648 Publication No. US20060029603A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Jonathon Henry ELLIS
                                                                                                                                                                                                                                                                                                                                                            64.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69.1%;
                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 68.5%
Matches 98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 69.1%
Matches 96; Conservative
                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Mus musculus
US-10-932-334-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-11-177-648-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

g

셤 ð

8

셤

ઠ

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEWSWIPLFILSGTAGVHSEVQLVQSGAEVKKPGASVKVSCKASGYTFTSYVIHWVRQRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 140;
                                                                                                                                                                                                TAKATSU, Kiyoshi
TITLE OF INVENTION: Antibody Against Human Interleukin-5
Receptor Alpha Chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Score 482.5; DB 7
; Pred. No. 2.9e-33;
12; Mismatches 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7005-115-999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FRASERO Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/11/193,512
FILING DATE: 01-Aug-2005
CLASSIFICATION: ~UNKNOWN>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/10/283,349
                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Pennie & Edmonds LLP
STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PILING DATE: 29-OCt-2002
APPLICATION NUMBER: US/08/836,561
ELING DATE: 09-MAY-1997
APPLICATION NUMBER: UP 232384/95
FILING DATE: 11-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION: SEQ ID NO: 83:
US-11-193-512-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Lawrence, III, Stanton T
REGISTRATION NUMBER: 25,736
                                                                                                           NAKAMURA, Kazuyasu
IIDA, Akihiro
ANAZAWA, Hideharu
HANAI, Nobuo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
Sequence 83, Application US/11193512
Publication No. US20050272918A1
GENERAL INFORMATION:
APPLICANT: KOIKE, Masamichi
FURUYA, Akiko
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 140 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: 212-790-9090
```

us-10-687-035-34.rapbn

Mon Mar 20 08:49:45 2006

ò

121 GSGYY---FDYWGOGTTLTVSS 139

Search completed: March 20, 2006, 07:32:42 Job time: 2.60454 secs

THIS PAGE BLANK (USPTO)

us-10-687-035-34.rapbm

```
GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd.
```

	Search time 24.6746 Seconds
_	Searc
w model	1:52 ;
sing 8	March 20, 2006, 07:31:52
ch, ue	2006
веак	20,
- protein search, using sw model	March
OM protein	Run on:
δ O	Run

March 20, 2006, 07:31:52; Search time 24.6746 Seconds (without alignments) 2353.772 Million cell updates/sec

US-10-687-035-34 758 1 MGWSWIFLFLEGGTAGVHSE......FGSGYYFDYWGQGTTLITVSS 139

Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

1867569 seqs, 417829326 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 100 summaries

/cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep: Published Applications AA Main:* **Database**:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		Appl	App1	Appl	Appl	App	App.	Appl	Appl	Appli	Appli	Appl	Appl	Appl	Appl	Appli	Appli	Appl	App.	Appl	App							
	Description	34.	90	90,	69	153	154	14,	14,	,	7,	13,	12,	11,	14,	7, 1	6	28,	158,	27,	72,	72,	85,	26,	26,	30,	30,	157,
SUMMARIES		Segmence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence
		US-10-687-035-34	JS-10-389-155-60	JS-10-389-417-60	US-10-452-357-69	US-10-462-062-153	JS-10-462-062-154	JS-09-982-107-14	JS-10-781-989-14	JS-09-903-327A-6	JS-09-903-327A-2	JS-09-903-327A-13	JS-09-903-327A-12	JS-09-903-327A-11	JS-09-903-327A-14	JS-10-768-193-7	JS-10-774-076-9	JS-10-365-123-28	JS-10-462-062-158	JS-10-837-904-27	JS-10-389-155-72	JS-10-389-417-72	JS-10-452-357-85	JS-09-301-593-26	JS-10-159-006-26	JS-09-301-593-30	JS-10-159-006-30	US-10-462-062-157
	ij	Sn	n	S	S	S	nS	as	S	S	Sn	ns	ns	S	S	ns	SD	ns	Sn	S	ns	S	as	S	SD	ns	S	ns
	DB		4	4	4	4	4	٣	S	٣	m	m	m	٣	m	4	4	4	4	S	4	4	4	٣	4	٣	4	4
	Query Match Length DB	139	135	135	135	137	137	132	132	438	456	493	210	597	613	136	138	139	137	135	138	138	138	143	143	472	472	137
عد	Query Match	100.0	82.5	82.5	82.5	81.3	81.3	80.9	80.9	79.2	79.2	79.2	79.2	79.2	79.2	77.2	76.3	76.1	74.9	74.8	74.6	74.6	74.6	74.4	74.4	74.4	74.4	73.7
	Score	758	625	625	625	919	616	613.5	613.5	600.5	600.5	600.5	600.5	600.5	600.5	585.5	578.5	577	268	567	565.5	565.5	565.5	564	564	564	564	559
	Result No.	-	7	٣	4	2	9	7	80	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27

			4.		**	
equence 79 equence 18 equence 2, equence 12	equence 11 equence 11 equence 21 equence 2 equence 2 equence 2 equence 2	equence 2, equence 2,	equence 3, equence 3, equence 3, equence 3, equence 3, equence 3, equence 3, equence 111 equence 111	equence 8, equence 12, equence 12, equence 12, equence 13, equence 13, equence 13, equence 47, equence		equence 4, aduence 6, aduence 6, aduence 2, aduence 36, aduence 20, aduence 40, aduence 40, aduence 44, aduence 46,
-10-810-861A- -10-828-782A- -10-500-696-2	10.221.131.93 10.399.518-11. 10.399.518-11. 10.642.065A.8 10.642.060-2 10.642.069-2 10.642.069-2 10.642.069-2	10.642-124- 10.620-850- 10.642-118- 10.642-119- 10.642-099- 10.642-064- 10.642-116- 10.642-116- 10.642-106- 10.642-106- 10.642-106- 10.642-106-	-10-642-071- -09-772-120- -10-138-505- -10-257-864A- -10-399-518- -10-399-585-	11-0723-003- 11-074-603- 11-074-6039- 11-074-6039- 11-074-6039- 11-074-639- 11-074-639- 11-074-639- 11-074-639- 11-074-639- 11-074-639- 11-074-035- 11	US-10-006-773-13 US-10-389-155-32 US-10-389-155-32 US-10-389-155-32 US-10-389-155-32 US-10-452-357-19 US-01-779-784-31 US-01-79-67 US-09-929-65-4 US-09-929-65-4 US-09-929-65-4 US-09-929-65-4 US-09-929-65-4 US-09-929-65-4 US-10-462-062-139 US-10-462-062-140	09-797-481- 009-844-736- 10-162-396- 009-807-721- 00-881-823- 11-004-639- 00-881-823- 11-0723-003- 11-004-639- 11-0723-003- 11-0733-003- 11-723-003-
WWW44	· ቁ ቁ የ	44444400000000	្រាយឯងឯងឯ	Ⴠ ჿჀჿჀჿჀჿჀႷႷ	4 4 4 4 4 A A A A A A A A	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~~	ւտատատուսու	, , , , , , , , , , , , , , , , , , ,	) U 4 4 M M M M M M C	<b>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</b>	135 600 135 135 136 130 138 138	4444044077014
mm 0000				44444444666	07077700707007007000000000000000000000	
55. 55. 51.			0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		537 528 528 528 528 528 528 528 528 528 528	
3 3 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	1 W W W W W W W 4 4	4 4 4 4 4 4 4 4 5 15 15 18 1 13 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	14000000000000000000000000000000000000	66666666666666666666666666666666666666	75 77 77 77 88 88 88 88 88 88	888 890 937 948 960 100

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MGWSWIPLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: 776.1 heavy chain polypeptide variable region (776.1H)
US-10-687-035-34
                                                                                                                   Sequence 34, Application US/10687035

Publication No. US20050064518A1

GENERAL INFORMATION:
APPLICANT: Albone, Earl F.
APPLICANT: Soliis, Daniel A.
ITLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
ITLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
ITLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
ITLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
ITLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
ITLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
ITLE OF INVENTION NUMBER: 00/485,986
PRIOR PILING DATE: 2003-10-15
PRIOR APPLICATION NUMBER: 60/485,986
PRIOR PILING DATE: 2003-10-12
PRIOR PILING DATE: 2003-10-12
NUMBER OF SEQ ID NOS: 71
SEQ ID NO 34
LENGTH: 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 60, Application US/10389155
Publication No. US20030229208A1
GENERAL INFORMATION:
Co. Man Sung
Schneider, William P.
Landolfi, Nicholas F.
Coelingh, Kathleen L.
Selick, Harold E.
TITLE OF INVENTION: Improved Humanized Immunoglobulins
NUMBER OF SEQUENCES: 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 758; DB 5;
100.0%; Pred. No. 4.4e-59;
tive 0; Mismatches 0;
ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 94111-3834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 100.
Matches 139; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-389-155-60
                                                                                                           -10-687-035-34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
```

윱

ઠ 셤

셤 ઠે

ò

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSITSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Co, Man Sung
Schneider, William P.
Schneider, William P.
Landolfi, Nicholas F.
Coelingh, Kathleen L.
Selick, Harold E.
TITLE OF INVENTION: Improved Humanized Immunoglobulins
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESSE
ADDRESSE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 82.5%; Score 625; DB 4; Length 135; Best Local Similarity 84.9%; Pred. No. 2.3e-47; Matches 118; Conservative 7; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 011823-002650US TELECOMMUNICATION INFORMATION:
              PRICATION NUMBER: US/10/389,155

FILING DATE: 13-Mar-2003

PRIOR APPLICATION DATA:

PRICATION NUMBER: US/09/325,000

FILING DATE: 01-JUN-1999

APPLICATION NUMBER: US 07/290,975

FILING DATE: 28-DEC-1988

APPLICATION NUMBER: US 07/310,252

FILING DATE: 13-FEB-1989

APPLICATION NUMBER: US 07/590,274

FILING DATE: 13-FEB-1980

APPLICATION NUMBER: US 07/590,274

FILING DATE: 19-EC-1990

APPLICATION NUMBER: US 07/594,278

FILING DATE: 19-EC-1990

APPLICATION NUMBER: US 07/594,278

FILING DATE: 19-EC-1990

APPLICATION NUMBER: US 07/594,278

FILING DATE: 19-EC-1990

APPLICATION NUMBER: US 08/484,537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: USA
ZIP: 94111-3834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 60:
US-10-389-155-60
                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Smith, William M.
REGISTRATION NUMBER: 30,223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 60, Application US/10389417
Publication No. US20040049014A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 135 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GSGYYPDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118 -GRPAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Queen, Cary L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: California
CURRENT APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-389-417-60
```

```
Query Match
Best Local Similarity 84.9%;
Matches 118; Conservative
                                                                                                                                                                                                                                                 ORGANISM: Artificial FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GKILEWIGYIYPYNGVSDYNQNPKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIPLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MGWSWIPLFLLSGTAGVHSBVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Co, Man Sung
APPLICANT: Co, Man Sung
APPLICANT: Co, Man Sung
APPLICANT: Schneider, William
APPLICANT: Schneider, William
APPLICANT: Landolfi, Nicholas
APPLICANT: Coelingh, Rathleen
APPLICANT: Selick, Harold
TITLE OF INVENTION: Improved Humanized Immunoglobulins
FILE REPERENCE: 05882.0078.CNUS01
CURRENT APPLICATION NUMBER: US/10/452,357
CURRENT APPLICATION NUMBER: 09/18,993
PRIOR PILING DATE: 2000-11-22
PRIOR APPLICATION NUMBER: 09/487,200
PRIOR PILING DATE: 1995-06-07
PRIOR PILING DATE: 1995-06-07
PRIOR PILING DATE: 1995-06-07
PRIOR PILING DATE: 1995-06-07
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 011823-002650US TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 625; DB 4;
Pred. No. 2.3e-47;
                                                                                                                                            APPLICATION NUMBER: US/09/325,000
PILING DATE: 01-010-1999
APPLICATION NUMBER: US 07/290,975
FILING DATE: 28-DEC-1988
APPLICATION NUMBER: US 07/310,252
FILING DATE: 13-PEB-1989
APPLICATION NUMBER: US 07/590,274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7; Mismatches
                                                                                                                                                                                                                                                                                                                        FILING DATE: 28-SEP-1990
APPLICATION NUMBER: US 07/634,278
FILING DATE: 19-DEC-1990
APPLICATION NUMBER: US 08/484,537
FILING DATE: 07-UUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 60:
US-10-389-417-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY AGENT INFORMATION:
NAME: Smith, William M.
REGISTRATION NUMBER: 30,223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1990-12-19
APPLICATION NUMBER: 07/590,275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 69, Application US/10452357
Publication No. US20040058414A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   118 -GRPAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 82.5%;
Best Local Similarity 84.9%;
Matches 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE:
                       CURRENT AP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
```

```
GENERAL INFORMATION:
APPLICANT: SATO, KOH
APPLICANT: SATO, KOH
APPLICANT: ADACHI, HUDEKI
APPLICANT: ADACHI, HUDEKI
TITLE OF INVENTION: HUMANIZED ANTIBODIES AGAINST HUMANIZED ANTIBODIES
TITLE OF INVENTION: HUMBER: US/10/462,062
TITLE OF INVENTION: LOS 3466-0360
CURRENT APPLICATION NUMBER: US/10/462,062
CURRENT PILING DATE: 2003-06-16
PRIOR APPLICATION NUMBER: PCT/JP99/01768
PRIOR APPLICATION NUMBER: JP 10-91850
PRIOR APPLICATION NUMBER: JP 10-91850
PRIOR PILING DATE: 1999-04-03
PRIOR PILING DATE: 1999-04-03
SOFTWARKER PRECEDIN VEY: 2.1
SEQ ID NO 153
LENGTH: 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Artificial Sequence
; FRATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Full-length amino action of The Information: sequence for H chain V region of anti-TF mouse monoclonal context INFORMATION: antibody ATR-2 US-10-462-062-153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GKILEWIGYIYPYNGVSDYNONFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GKSLEWIGYIDPYNGGTIYNQKFKGKATLTVDKSSSTAFMHLNSLTSEDSAVYYCARG-- 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MGWSWIFLFLLSGTAGVHSBVQLQQSGPBLVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPBLVKPGASVKISCKASGYTFTDYNMHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSWIFLFLLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Сарв ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 81.3%; Score 616; DB 4; Length 137; Best Local Similarity 82.7%; Pred. No. 1.4e-46; Matches 115; Conservative 8; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                  Length 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                            Score 625; DB 4;
Pred. No. 2.3e-47;
7; Mismatches 10
                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Heavy chain M195 antibody US-10-452-357-69
PRIOR FILING DATE: 1989-02-12,
PRIOR APPLICATION NUMBER: 07/290,975
PRIOR FILING DATE: 1988-12-28
NUMBER OF SEQ ID NOS: 113
SEQ ID NO 69
LENGTH: 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 153, Application US/10462062 Publication No. US20040044187A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 118 -GRPAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GSGYYPDYWGQGTTLTVSS 139
```

```
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----YFDYWGQGTTLTVSS 132
                                                                                                                                                                                                                     121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                          118 ----YFDYWGQGTTLTVSS 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 83.5%;
Matches 116; Conservative
  Matches 116; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Mouse
US-10-781-989-14
                                                                             8
                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                8
                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                       Sequence 154, Application US/10462062

Publication No. US2004004187A1

GENERAL INFORMATION:

APPLICANT: SATO, KOH

TITLE OF INVENTION: HUMANIZED ANTIBODIES AGAINST HUMAN TISSUE FACTOR (TF)

TITLE OF INVENTION: HUMBER: US/10/462,062

CURRENT FILING DATE: 2003-06-16

FRIOR FILING DATE: 1999-04-02

PRIOR FILING DATE: 1999-04-03

PRIOR FILING DATE: 1999-04-03

NUMBER OF SEQ ID NOS: 183

SOFTWARE: PALENTIN VET. 2.11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Description of Artificial Sequence: Full-length amino acid OTHER INFORMATION: sequence for H chain V region of anti-TF mouse monoclonal OTHER INFORMATION: antibody ATR-3
US-10-462-062-154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GKSLEWIGYIDPYNGGTIYNQKFKGKATLIVDKSSSTAFMHLNSLTSEDSAVYYCARG-- 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MEMSWIFLFLISGITGVHSEIQLQQSGPELVKPGASVKVSCKASGYSFTDYNMYWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 14, Application US/09982107

Patent No. US20020159958A1

GENERAL INFORMATION:

APPLICANT: HIATY, ANDREW C.

APPLICANT: HIATY, ANDREW C.

APPLICANT: HIATY, MICH B.

TITLE OF INVENTION: PROTECTION PROTEINS IN PLANTS AND THEIR USE

TITLE OF INVENTION: PROTECTION PROTEINS IN PLANTS AND THEIR USE

TITLE OF INVENTION: WHORE: US/09/982,107

CURRENT APPLICATION UNWER: US/09/982,107

CURRENT FILING DATE: 2001-10-16

NUMBER OF SEQ ID NOS: 19

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 14

LENGTH 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MGWSWIPLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; PEATURE:
; OTHER INFORMATION: Description of Unknown Organism: Guy's 13 Gamma
US-09-982-107-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 613.5; DB 3; Length 132;
Pred. No. 2.3e-46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
81.3%; Score 616; DB 4; Length 137;
Best Local Similarity 82.7%; Pred. No. 1.4e-46;
Matches 115; Conservative 8; Mismatches 14; Indels
119 GEGYYFDYWGQGTTLTVSS 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GSGYYFDYWGOGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Unknown Organism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
Sequence 6, Application US/09903327A

Batent No. USZODGO16433A1

GENERAL INFORMATION.

APPLICANT: Nomerow, Glen R.

APPLICANT: Li, Erguang

TITLE OF INVENTION: BENUTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGET

TITLE OF INVENTION: DELIVERY

TITLE OF INVENTION: DELIVERY

TITLE OF INVENTION NUMBER: US/09/903,327A

CURRENT FILING DATE: 2001-07-10

FRIOR PELLING DATE: 2000-07-10

NUMBER OF SEQ ID NOS: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 14, Application US/10781989
| Sequence 14, Application US/10781989
| Publication No. US2005202026A1
| GENERAL INFORMATION:
| APPLICANT: HIATT, Andrew C.
| APPLICANT: HIATT, Andrew C.
| APPLICANT: LEHNER, Thomas
| TITLE OF INVENTION: CONTAINING PROTECTION PROTEINS IN PLANTS AND THEIR USE
| TITLE OF INVENTION: CONTAINING PROTECTION PROTEINS IN PLANTS AND THEIR USE
| TITLE OF INVENTION: CONTAINING PROTECTION PROTEINS IN PLANTS AND THEIR USE
| FILE REFERENCE: 415142000303
| CURRENT APPLICATION NUMBER: US/10/781,989
| CURRENT APPLICATION NUMBER: 08/434,000
| PRIOR FILING DATE: 1995-05-04
| PRIOR FILING DATE: 1994-12-30
| NUMBER OF SEQ ID NOS: 19
| SOFTWARE: FastSEQ for Windows Version 4.0
| SEQ ID NO 14
| LENGTH: 132
| TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                     61 GKILEWIGYIYPYNGVSDYNQNPKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MEWTWVFLFILSGTAGVHSGVQLQQSGPDLVKPGASVKISCKASGYTFTDYNIHWVKQSR 60
                                                     1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                              1 HENTHAVPLFLLSGTAGVHSGVQLQQSGPDLVKPGASVKISCKASGYTFTDYNIHWVKQSR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPCASVKISCKASGYTFTDYNIHWVKQSH 60
     Gaps
  7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 613.5; DB 5;
Pred. No. 2.3e-46;
6; Mismatches 10;
```

```
APPLICANT: Li, Erguang
TITLE OF INVENTION: BIPUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGETIF
TITLE OF INVENTION: GENB
TITLE OF INVENTION: DELIVERY
TITLE OF INVENTION: DELIVERY
TITLE OF INVENTION: DELIVERY
TITLE OF INVENTION: DELIVERY
CURRENT APPLICATION NUMBER: US/09/903,327A
CURRENT FILING DATE: 2001-07-10
RIGOR APPLICATION NUMBER: 09/613,017
RIGOR APPLICATION NUMBER: 09/613,017
RIGOR PAPLICATION NUMBER: 09/613,017
RIGOR PAPLICATION NUMBER: 09/613,017
RIGOR PARTER PARTERS PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PARTER PAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12, Application US/09903327A;
Sequence 12, Application US/09903327A;
Patent No. US20020164333A1
GENERAL INFORMATION:
FAPLICANT: Nemerow, Glen R.;
APPLICANT: Li, Erguang
TITLE OF INVENTION: BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGETE;
TITLE OF INVENTION: DELIVERY
TITLE OF INVENTION: DELIVERY
TITLE OF INVENTION: DELIVERY
CURRENT PPLICATION NUMBER: US/09/903,327A
CURRENT PILING DATE: 2000-07-10
PRIOR REPLICATION NUMBER: 09/613,017
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 33
SOFFWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 12
LENGTH: 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
CTHER INFORMATION: Fusion protein with N-terminal portion of DAV-1 heavy chain
CTHER INFORMATION: and EGF mature peptide
US-09-903-327A-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
; OTHER INFORMATION: Fusion protein with N-terminal portion of DAV-1 heavy chain
; OTHER INFORMATION: and IGF-1 mature peptide
US-09-303-327A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 GKSLEWIGYIYPYKGGTGYNQKPKSKATLTTDSSSNTAYMELRSLTSDASAVYYCARG-- 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MGWSWIFLFLLSGTAGVHSEVOLOOSGPELVKPGASVKISCKASGYTFTDYNMHWVKOSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 79.2%; Score 600.5; DB 3; Length 493; Best Local Similarity 82.0%; Pred. No. 1.3e-44; Matches 114; Conservative 6; Mismatches 12; Indels 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 510;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 79.2%; Score 600.5; DB 3; Best Local Similarity 82.0%; Pred. No. 1.4e-44; Matches 114; Conservative 6; Mismatches 12;
                                                                                    Application US/09903327A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119 ----IAYWGQGTLVTVSA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                           APPLICANT: Nemerow, Glen R. APPLICANT: Li, Erquang
                                                                               Sequence 13, Applicat
Patent No. US20020164
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application US/09903327A

Patent No. US20020164333A1

GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
GIVE BETOM GIVE

TITLE OF INVENTION: BITUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGET

TITLE OF INVENTION: DELIVERY

TITLE OF INVENTION: DELIVERY

FILE REPERENCE: 22908-1228

CURRENT APPLICATION NUMBER: US/09/903,327A

CURRENT FILING DATE: 2001-07-10

PRIOR APPLICATION NUMBER: 09/613,017

PRIOR PILING DATE: 2000-07-10

NUMBER OF SEQ ID NOS: 33

SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GKSLEWIGYIYPYKGGTGYNQKFKSKATLTTDSSSNTAYMELRSLTSDASAVYYCARG-- 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GKSLEWIGYIYPYKGGTGYNQKFKSKATLTTDSSSNTAYMBLRSLTSDASAVYYCARG-- 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MGWSWIFLFLESGTAGVHSEVOLOOSGPELVKPGASVKISCKASGYTFTDYNMHWVKOSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSWIFLPLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNWHWVKQSH 60
                                                                                                                                                                                                                                                                                      LOCATION: (0) ...(0)
COTHER INFORMATION: Portion of DAV-1 heavy chain used for fusion protein
COTHER INFORMATION: Difunctional antibody
US-09-903-327A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; LOCATION: (0)...(0)
; OTHER INFORMATION: DAV-1 heavy chain, penton base monoclonal antibody
US-09-903-327A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 79.2%; Score 600.5; DB 3; Length 456; Best Local Similarity 82.0%; Pred. No. 1.2e-44; Matches 114; Conservative 6; Mismatches 12; Indels 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 3; Length 438;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 79.2%; Score 600.5; DB 3; Length Best Local Similarity 82.0%; Pred. No. 1.2e-44; Matches 114; Conservative 6; Mismatches 12; Indels
SOPTWARE: PastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |||||| :|||:
119 ----IAYWGQGTLVTVSA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GSGYYPDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119 ----IAYWGQGTLVTVSA 132
                                                                                                                                                                                                                                                   NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Mouse
                                                                                                                                                                   ORGANISM: Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

ઠે a ò

용 ઠે

```
SEQ ID NO 14
LENGTH: 613
TYPE: RT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Fusion protein with N-terminal portion of DAV-1 heavy chain OTHER INFORMATION: and SCF mature peptide
                                                                                                                                                                                                                                                                                                                                                                                                                61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GKSLEWIGYISCYNGATSYNQKFKGKATFTVDTSSSTAYMQFNSLTSEDSAVYYCAR--: 117
                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                              1 MGWSWIFLELLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNWHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: MEDICAL & BIOLOGICAL LABORATORIES CO., LTD.
APPLICANT: The director of Chubu National Hospital
APPLICANT: YANAGISANA, Karsuhiko
APPLICANT: SHIBATA, Massa
TITLE OF INVENTION: Antibody recognizing GM1 ganglioside-bound
TITLE OF INVENTION: amyloid b-protein and DNA encoding the antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                   Query Match 79.2%; Score 600.5; DB 3; Length 613; Best Local Similarity 82.0%; Pred. No. 1.7e-44; Matches 114; Conservative 6; Mismatches 12; Indels 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 585.5; DB 4;
Pred. No. 6.9e-44;
7; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: PO102402

CURRENT APPLICATION NUMBER: US/10/768,193

CURRENT FILING DATE: 2004-02-02

FRIOR APPLICATION NUMBER: UP P2001-235700

PRIOR FILING DATE: 2001-08-03

PRIOR FILING DATE: 2002-08-01

PRIOR FILING DATE: 2002-08-01

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 16
US-10-774-075-9
Sequence 9, Application US/10774076
; Publication No. US20040210040A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 7, Application US/10768193
Publication No. US20040181042A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GSGYYPDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |||||| :|||:
----IAYWGQGTLVTVSA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 79.9
Matches 111; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Mus musculus
US-10-768-193-7
                                                                                                                                                                        US-09-903-327A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-768-193-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 14, Application US/09903327A

Sequence 14, Application US/09903327A

Patent No. US20020164333A1

RAPELICANT: Li, Erguang

APPLICANT: Li, Erguang

TITLE OF INVENTION: BEING

TITLE OF INVENTION: BEING

TITLE OF INVENTION: BELIVERY

FILE REFERENCE: 22908-1228

CURRENT APPLICATION NUMBER: US/09/903,327A

CURRENT FILING DATE: 2000-07-10

PRIOR APPLICATION NUMBER: 09/613,017

PRIOR FILING DATE: 2000-07-10

PRIOR FILING DATE: 2000-07-10

NUMBER OF SEQ ID NOS: 33

SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Li, Erquang
TITLE OF INVENTION: BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGET
TITLE OF INVENTION: BELVERY
FILE OF INVENTION: DELLYBRY
FILE REFERENCE: 22908-1228
FILE REFERENCE: 22908-1228
CURRENT PAPLICATION NUMBER: US/09/903,327A
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 09/613,017
PRIOR APPLICATION NUMBER: 09/613,017
SRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 33
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 11
LENGTH: 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Fusion protein with N-terminal portion of DAV-1 heavy chain ; OTHER INFORMATION: and TNF alpha mature peptide US-09-903-327A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GKSLEWIGYIYPYKGGTGYNQKFKSKATLTTDSSSNTAYWELRSLTSDASAVYYCARG-- 118
                                                                                                    61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                  61 GKSLEWIGYIYPYKGGTGYNOKFKSKATLTTDSSSNTAYMELRSLTSDASAVYYCARG-- 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYFFTDYNMHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79.2%; Score 600.5; DB 3; Length 597; 82.0%; Pred. No. 1.6e-44; ive 6; Mismatches 12; Indels 7
                                                                                                                                                                                                                                                                                                                                                                        Sequence 11, Application US/09903327A; Patent No. US20020164333A1; GENERAL INFORMATION: APPLICANT: Nemerow, Glen R.
                                                                                                                                                                                                                                  |||||| :||||
----IAYWGQGTLVTVSA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           L21 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119 ----IAYWGĞĞTLVTVSA 132
                                                                                                                                                                                                      121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 82.0
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
US-09-903-327A-14
                                                                                                                                                                                                                                                                                                                               RESULT 13
US-09-903-327A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                      119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
```

ठ

```
; OTHER INFORMATION: amino acid sequence for murine 19/2 heavy chain variable region US-10-365-123-28
APPLICANT: Protein Design Labs, Inc.
APPLICANT: Landolfi, et al.
TITLE OP INVENTION: Amphiregulin Antibodies and Their Use to Treat Cancer and TITLE OP INVENTION: Psoriasis
FILE REFERENCE: 05882.0064.NPUS01
CURRENT APPLICATION NUMBER: US/10/774,076
CURRENT FILING DATE: 2004-02-06
NUMBER OF SEQ ID NOS: 39
SOFTWARE: Patentin version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 ĠKSLEWIĠYIDPYYĠDPGYSQKFKGKAŢĹŢVĎKSSSŢĀYMHLNSĹŢSEDSAVYYCARRG- 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MEWRWIFLFLISGTTGVHSEIQLQQSGPELVKPGASVKVSCKASGYAFTNYNWYWQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64 WIGYLAPYSGGTGYNQRPKNRATLTVDKSSSTAYMELRSLTSDDSAVYYCARRD--RFPY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 IFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSHGKILE 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLESGTAGVHSEVOLOOSGPELVKPGASVKISCKASGYTFTDYNIHWVKOSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 76.1%; Score 577; DB 4; Length 139; Best Local Similarity 83.6%; Pred. No. 4e-43; Matches 112; Conservative 7; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 28, Application US/10365123
Fublication No. US20040053365A1
GENERAL INFORMATION:
APPLICANT: Renner, Christoph
APPLICANT: Burgess, Antony
APPLICANT: Burgess, Antony
TITE OF INVENTION: HUMANIZED GM-CSF ANTIBODIES
FILE REFERENCE: LUD 5729.1
CURRENT APPLICATION NUMBER: US/10/365,123
CURRENT FILING DATE: 2003-02-12
NUMBER OF SEQ ID NOS: 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120 NPPYYFDYWGQGTTLTVSS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 76.3%;
Best Local Similarity 79.1%;
Matches 110; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                   ; TYPE: PRT
; ORGANISM: mus sp.
US-10-774-076-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             126
                                                                                                                                                                                                                                                                SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
```

RESULT 18 US-10-462-062-158

```
OTHER INFORMATION: Description of Artificial Sequence: Full-length amino act OTHER INFORMATION: sequence for H chain V region of anti-TF mouse monoclonal OTHER INFORMATION: antibody ATR-8
US-10-462-062-158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GKSLEWIGYIDPYTGGTGYNQKFNDKATLTVDKSSSTAFMHLNSLTSEDSAVYYCAR--- 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
APPLICANT: ADACHI, HIDEKI
TITLE OF INVENTION: HUMANIZED ANTIBODIES AGAINST HUMAN TISSUE FACTOR (TF)
TITLE OF INVENTION: AND PROCESS OF PRODUCTION OF THE HUMANIZED ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
74.9%; Score 568; DB 4; Length 137;
Best Local Similarity 75.4%; Pred. No. 2.4e-42;
Matches 107; Conservative 11; Mismatches 16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: U.S.A.
ZIP: 20007-5106
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INTERLEUKIN-6 RECEPTOR
                                                                                     FILE REFERENCE: 053466-0360
CURRENT APPLICATION NUMBER: US/10/462,062
CURRENT FILING DATE: 2003-06-16
FRICH APPLICATION NUMBER: PCT/JP99/01768
FRICH APPLICATION NUMBER: PCT/JP99/01768
FRICH APPLICATION NUMBER: PCT/JP99/01768
FRICH RILING DATE: 1998-04-03
NUMBER OF SEQ ID NOS: 183
SOFTWARE: Peacentin Ver. 2.1
SEQ ID NO 158
LENGTH: 137
TYPE: PRT
TYPE: PRT
TYPE: PRT
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/837,904
PILING DATE: 04-May-2004
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: TSUCHIYA, Masayuki
SATO, Koh
BRNDIG, Mary Margaret
JONES, Steven Tarran
SALDANHA, Jose William
TITLE OP INVENTION: RESHAPED HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1:|:| :||:| :||:|
118 --GFYYDYDCYWGQGTLVTVSA 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEB: FOLEY & LARDNER STREET: 3000 K Street, N.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 27, Application US/10837904; Publication No. US20050142635A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Washington STATE: D.C.
```

```
a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 567; DB 5; Length 135;
Pred. No. 2.9e-42;
8; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Co, Man Sung
Schneider, William P.
Landolfi, Nicholas F.
Coelingh, Kathleen L.
Selick, Harold E.
TITLE OF INVENTION: Improved Humanized Immunoglobulins
NUMBER OF SEQUENCES: 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 9411.3834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP STREET: Two Embarcadero Center, Eighth Floor
                                 APPLICATION NOWBER: US 08/435,/1/
FILING DATE: 08-MAY-1995
APPLICATION NUMBER: US 08/137,117
FILING DATE: 20-DEC-1993
APPLICATION NUMBER: WO PCT/JP92/00544
APPLICATION NUMBER: UP 4-32084
FILING DATE: 19-FEB-1992
APPLICATION NUMBER: UP 3-95476
FILING DATE: 19-FEB-1992
APPLICATION NUMBER: UP 3-95476
FILING DATE: 25-APR-1991
ATTORNEY/AGRYT INFORMATION:
NAME: Wegner, Harold C.
REGISTRATION NUMBER: 25,258
REFERENCE/DOCKET NUMBER: 53466/234
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/389,155
FILING DATE: 13-Mar-2003
FILING DATE: 13-Jul-1998
APPLICATION NUMBER: US 08/436,717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 27:
                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (202) 672-5300
TELEFAX: (202) 672-5399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 72, Application US/10389155
Publication No. US20030229208A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118 -GGNRFAYWGOGTLVTVSA 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Queen, Cary L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 27
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 78.4
Matches 109; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-389-155-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-837-904-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MGWSWIPLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 138;
                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Smith, William M.
REGISTRATION NUMBER: 30,223
REPRENECTO-DOCKET NUMBER: 011823-002650US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74.6%; Score 565.5; DB 78.4%; Pred. No. 4.1e-42
FILING DATE: 01-JUN-1999
APPLICATION NUMBER: US 07/290,975
FILING DATE: 28-DEC-1988
APPLICATION NUMBER: US 07/310,252
FILING DATE: 13-FBB-1989
APPLICATION NUMBER: US 07/590,274
FILING DATE: 28-SEP-1990
APPLICATION NUMBER: US 07/634,278
FILING DATE: 19-DEC-1990
APPLICATION NUMBER: US 08/484,537
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 72:
US-10-389-155-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       completed: March 20, 2006, 07:35:11
                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 138 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (415) 576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 -RDYSMDYWGQGTSVTVSS 138
                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 78.4
Matches 109; Conservative
```

Sequence 3 Sequence 5 Sequence 5 Sequence 6 Sequence 6 Sequence 6 Sequence 7 Sequence 7 Sequence 6 Sequence 7 Sequence 7

Sequence Sequence Sequence Sequence

Sequence Sequence Sequence

Sequence Sequence Sequence

Sequence Sequence Sequence Sequence

Sequence Sequence Sequence Sequence

Title: Perfect score:

Run on:

ĕ

Sequence:

Scoring table:

Searched:

Database

```
-09-393-385B-112
-10-195-752-112
                                                                                                                                                                                                                                                                                                                                                                                                      -08-303-569B-31
-08-484-537-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -09-647-468-139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          130-78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT-US95-05262-7
 519
517.5
513.5
513.5
513.5
513.5
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
                                                                                                   March 20, 2006, 07:30:27; Search time 7.40237 Seconds (without alignments) 1552.466 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to have a
being printed,
                                                                                                                                                                                    58
MGWSWIFLFELSGTAGVHSE.....FGSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seguence 69,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to h
score greater than or equal to the score of the result bein
and is derived by analysis of the total score distribution.
              GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cgn2_6/ptodata/1/iaa/5_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6_COMB.pep:*
/cgn2_6/ptodata/1/iaa/H_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/RE_COMB.pep:*
                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -08-483-528B-91
-08-116-778E-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ·08-483-528B-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-301-593-26
US-09-301-593-30
                                                                                                                                                                                                                                                                            572060 segs, 82675679 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries
                                                                           protein - protein search, using sw model
                                                                                                                                                                                                                               BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Issued_Patents_AA:*
                                                                                                                                                                                                                                                                                                                                       Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                               US-10-687-035-34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
```

% Query Match 1

Score

Result No.

Sequence Sequence Sequence

Sequence Sequence Sequence Sequence

Sequence Sequence Sequence

Sequence Sequence Sequence Sequence

Sequence Sequence Sequence Sequence Sequence Sequence Sequence

Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Seq

Sequence Sequence Sequence

## ALIGNMENTS

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MGMSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 625; DB 1; Length 135;
Pred. No. 2e-57;
7; Mismatches 10; Indels
                                                                                               APPLICANT: OUEEN, Cary L.
APPLICANT: CO, Man Sung
APPLICANT: SCHNEIDER, William P.
APPLICANT: SCHNEIDER, William P.
APPLICANT: LANDOLLE, Kathleen L.
APPLICANT: SELICK, Harold E.
APPLICANT: SELICK, Harold E.
APPLICANT: SELICK, Harold E.
APPLICANT: SELICK, Harold E.
ADPLICANT: SILICK, HARONGE E.
ADDRESSEDONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend Khourie and Crew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
MUDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
ODBWATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/634,278
FILING DATE: 19-DEC-1990
CLASSIFICATION DATA:
APPLICATION NUMBER: US 07/590,274
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/310,252
FILING DATE: 13-FEB-1989
PRIOR APPLICATION DATE: US 07/290,975
FILING DATE: 13-FEB-1989
PRIOR APPLICATION NUMBER: US 07/290,975
FILING DATE: 28-DEC-1988
ATTORNEY/AGENT INFORMATION:
APPLICATION NUMBER: US 07/290,975
FILING DATE: 28-DEC-1988
ATTORNEY/AGENT INFORMATION:
APPLICATION NUMBER: 30,223
REGISTRATION NUMBER: 30,223
REGISTRATION NUMBER: 30,223
REGISTRATION NUMBER: 11823-002600
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 326-2402
INFORMATION FOR SED ID NO: 69:
SEQUENCE CHARACTERISTICS:
LENGTH: 135 amino acids
TTENE
                                                                                                                                                                                                                                                                                                                                E: Townsend and Townsend Khourie and Crew 379 Lytton Avenue
                          ; Sequence 69, Application US/07634278; Patent No. 5530101; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |||||||::||||
118 -GRPAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 84.9%;
Matches 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-634-278-69
                                                                                                                                                                                                                                                                                                                                                                                  CITY: Palo Alto
STATE: California
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 94301
-634-278-69
                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match
82.5%; Score 625; DB 1; Length 135;
Best Local Similarity 84.9%; Pred. No. 2e-57;
Matches 118; Conservative 7; Mismatches 10; Indels
Sequence 69, Application US/08477728

Sequence 69, Application US/08477728

Sequence 69, Application US/08477728

SENERAL INFORMATION:

APPLICANT: CUREN, Cary L.

APPLICANT: SCHEIDER, William P.

APPLICANT: SELICK, Harold E.

TITLE OF INVENTION: IMPROVED HUMANIZED IMMUNOGLOBLINS

NUMBER OF SEQUENCES:

ADDRESSEE: Townsend and Townsend and Crew LLP

STREET: Two Embarcadero Center, 8th Floor

CITY: Palo Alto

STATE: California

COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OFTAGATION STSTEM:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,728
FILING DATE: O'-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION TATA:
APPLICATION NUMBER: US 07/634,278
FILING DATE: 19-DEC-1990
PRIOR APPLICATION NUMBER: US 07/590,274
PILING DATE: 39-DEC-1990
PRIOR APPLICATION NUMBER: US 07/590,274
PILING DATE: 28-SEP-1990
PRIOR APPLICATION NUMBER: US 07/310,252
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/310,252
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/290,975
FILING DATE: 28-DEC-1988
ATTORNEY/AGENT INFORMATION:
NAME: SMICH MAILIAM M
REGISTRATION NUMBER: 30,223
REFERENCE/DOCKET NUMBER: 11823-002600
TELECOMMUNICATION INFORMATION:
THE FORMATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 94111
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118 -GRPAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: (415) 326-2400
TELEFAX: (415) 326-2422
INFORMATION FOR SEQ ID NO: 69:
SEQUENCE CHARACTERISTICS:
LENGTH: 135 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         : 135 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein US-08-477-728-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

RESULT 3

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 82.5%; Score 625; DB 1; Length 13
Best Local Similarity 84.9%; Pred. No. 2e-57;
Matches 118; Conservative 7; Mismatches 10; Indels
                                                                                                                                                           APPLICANT: CO, Man Sung
APPLICANT: SCHNEIDER, William P.
APPLICANT: SCHNEIDER, Wilcholas F.
APPLICANT: COELINGH, Kathleen L.
APPLICANT: SELICK, Harold E.
APPLICANT: SELICK, Harold E.
APPLICANT: SELICK, Harold E.
APPLICANT: SELICK, HARONED HUMANIZED IMMUNOGLOBLINS
NUMBER OF SUGURNES: 113
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 94301

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
SOGTWARE: Patentin Release #1.0, Version #1.25
SOGTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US 07/634,278
FILING DATE: 19-DEC-1990
PRIOR APPLICATION NUMBER: US 07/590,274
FILING DATE: 28-SEP-1990
PRIOR APPLICATION NUMBER: US 07/590,274
FILING DATE: 13-FEB-1989
PRIOR APPLICATION NUMBER: US 07/290,975
FILING DATE: REBEL-1989
PRIOR APPLICATION NUMBER: US 07/290,975
FILING DATE: 38-DEC-1988
ATTORNEY/AGENT INFORMATION:
NAME: Smith, William M
REFERENCE/DOCKET NUMBER: 11823-002610
TELERCOMMULCATION INFORMATION:
TELERCOMMULCATION INFORMATION:
TELERCOMMULCATION INFORMATION:
TELERCOMMULCATION INFORMATION:
TELERCOMMULCATION INFORMATION:
TELERCOMMULCATION INFORMATION:
TELERCOMMULCATION INFORMATION:
TELERCOMMULCATION INFORMATION:
TELERCOMMULCATION INFORMATION:
Application US/08487200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IELEFAX: (415) 326-2400
INFORMATION FOR SEQ ID NO: 69.
SEQUENCE CHARACTERISM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 379 Lytton Avenue CITY: Palo Alto STATE: California COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; MOLECULE TYPE: protein US-08-487-200-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1; Length 135;
                                                                                                                                                      APPLICANT: QUEEN, Cary L.
APPLICANT: CO, Man Sung
APPLICANT: SCHNEIDER, William P.
APPLICANT: SCHNEIDER, William P.
APPLICANT: SCHNEIDER, Wacholas F.
APPLICANT: SELICK, Marchleen L.
APPLICANT: SELICK, Marchleen L.
APPLICANT: SELICK, Marchleen L.
APPLICANT: SILICK, Marchleen L.
APPLICANT: SCHNEIDER, MARCHLEEN, MARC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 625; DB 1; Length 13
Pred. No. 2e-57;
7; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: 1 LBM FC COUMPGALLOS
SOFTWARE: PATENTING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN RC16as6 #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/474,040
FILING DATE: 07-JUN-1995
CLASSIPICATION: 536
RIOR APPLICATION NUMBER: US 07/634,278
FILING DATE: 19-DEC-1990
APPLICATION NUMBER: US 07/530,274
FILING DATE: 12-DEC-1990
PRICH APPLICATION NUMBER: US 07/310,252
FILING DATE: 13-FEB-1999
FILING DATE: 13-FEB-1999
FILING DATE: 13-FEB-1999
FILING DATE: 32-DEC-1988
FILING DATE: 32-DEC-1988
APPLICATION NUMBER: US 07/290,975
FILING DATE: 326-2400
FILING DATE: 28-DEC-1988
ATTORNEY/AGENT INFORMATION:
TELEFRACE/DOCKET UNBER: 11823-002600
TELECOMMUNICATION INFORMATION:
TELEFRACE (415) 326-2402
INFORMATION FOR SEQ ID NO: 69:
SEQUENCE CHARACTERISTICS:
TENAME: TELEFRACE (115) 326-2422
INFORMATION FOR SEQ ID NO: 69:
SEQUENCE CHARACTERISTICS:
TENAME: TENAMER: THE AMINO ACIDS
                                       pplication US/08474040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTER: US
ZIP: 94301
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 82.5
Best Local Similarity 84.9
Matches 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , MOLECULE TYPE: protein US-08-474-040-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Palo Alto
STATE: California
```

118 -GRPAMDÝWGÓGTSVTVSS 135

61 GKSLEWIGYIYPYNGGTGYNQKFKSKATLTVDNSSSTAYMDVRSLTSEDSAVYYCAR

ò

RESULT 4 US-08-487-200-69

RESULT 5 US-08-484-537-69

```
Sequence 154, Application US/09647468
Patent No. 6677436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 82.7%;
Matches 115; Conservative E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Mus sp.
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82.5%; Score 625; DB 2; Length 135;
84.9%; Pred. No. 2e-57;
tive 7; Mismatches 10; Indels
                                                                               APPLICANT: COLUMN SUNG
APPLICANT: COLUMN SUNG
APPLICANT: SCHNEIDER, William P.
APPLICANT: LANDOLFI, Nicholas F.
APPLICANT: CELINCH, Kathleen L.
APPLICANT: SELICK, Harold E.
TITLE OF INVENTION: IMPROVED HUMANIZED IMMUNOCLOBLINS
NUMBER OF SEQUENCES: 113
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townseend and Townsend Khourie and Crew
STREET: 379 Lytton Avenue
CITY: Palo Alto
CITY: Palo Alto
STATE: California
                                                                                                                                                                                                                                                                                                                                             COUNTRY: USE OF THE COUNTRY: USE OF THE COUNTRY READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
PRIOR APPLICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/634,278
FILING DATE: 19-DEC-1990
APPLICATION NUMBER: US 07/590,274
FILING DATE: 28-SEP-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/310,252
FILING DATE: 13-FEB-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/290,975
FILING DATE: 28-DEC-1988
ATTORNEY/AGENT INFORMATION:
NAME: Smith, William M
REGISTRATION NUMBER: 30,223
REGISTRATION NUMBER: 11823-00260
TELECOMMUNICATION INFORMATION:
Sequence 69, Application US/08484537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        118 -GRPAMDÝWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (415) 326-2422
INFORMATION FOR SEQ ID NO: 69:
SEQUENCE CHARACTERISTICS:
LENGTH: 135 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 82.5
Best Local Similarity 84.9
Matches 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
US-09-647-468-153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-484-537-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

; Sequence 153, Application US/09647468

```
APPLICANT: ADACHI, HIDEKI
APPLICANT: ADACHI, HIDEKI
APPLICANT: ADACHI, NACHIRO
TITLE OF INVENTION: HUMANIZED ANTIBODY AGAINST HUMAN TISSUE FACTOR (TF) AND
TITLE OF INVENTION: PROCESS OF PRODUCTION OF THE HUMANIZED ANTIBODY
TITLE OF INVENTION: OBJECT OF 0996
CURRENT APPLICATION NUMBER: US/09/647,468
CURRENT FILING DATE: 1999-04-02
PRIOR PILING DATE: 1999-04-02
PRIOR PLING DATE: 1999-04-03
PRIOR PLING DATE: 1999-04-03
PRIOR PLING DATE: 1999-04-03
SOFTWARE: PALENTI NOS: 183
SOFTWARE: PALENTI NOS: 21
SEQ ID NO: 183
LENGTH: 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSWIFLFFLLSGTAGVHSEVQLQQSGPRLVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Description of Artificial Sequence: Amino acid OTHER INFORMATION: sequence coding for H chain V region of ant-TF OTHER INFORMATION: mouse monoclonal antibody ATR-3
                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Description of Artificial Sequence: Amino acid OTHER INFORMATION: sequence coding for H chain V region of ant-TF; OTHER INFORMATION: mouse monoclonal antibody ATR-2 US-09-647-468-153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 616; DB 2; Length 137;
Pred. No. 1.7e-56;
8; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81.3%; Score 616; DB 2; Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
```

```
1 MEWTWVPLFLLSGTAGVHSGVQLQQSGPDLVKPGASVKISCKASGYTFTDYNIHWVKQSR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: WORD Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/312,157
FILING DATE: 14-May-1999
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/434,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PILING DATE: -Unknown>
ATTORNEY/AGBYT INFORMATION:
NAME: Guise, Jeffrey W
REGISTRATION NUMBER: 34,613
REFERENCE/DOCKEY NUMBER: 212/
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 552-8400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: (619) 552-8400
TELEFAX: (619) 552-0159
                                                                                                                                                                                                                                                                             Sequence 14, Application US/09312157
Patent No. 6303341
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE LISTING
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 132 amino acids
                                                                                                                             121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                        118 ----YPDYWGQGTTLTVSS 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 90071
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX: 67-35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-312-157-14
                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                    61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                             1 MEWSWIFLFLISGTIGVHSEIQLQQQGGPELVKPGASVKVSCKASGYSFTDYNMYWVKQSH 60
                                                                 1 MGWSWIFLFRISGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MGWSWIPLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                        2; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 613.5; DB 2; Length
Pred. No. 3e-56;
6; Mismatches 10; Indels
                        14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                         PATENT NO. 6046037
GENERAL INFORMATION:
APPLICANT: ANDREW C. HIATT, JULIAN
APPLICANT: K.-C. MA, THOMAS LEHNER
TITLE OF INVENTION: IMMUNOSLOBULINS CONTAINING PR
TITLE OF INVENTION: PROTEINS IN PLANTS AND THEIR
    Pred. No. 1.7e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 435
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA: including application
PRIOR APPLICATION UNDAR: 08/367,395
APPLICATION UNDARE: 12/30/94
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Guy's 13 Gamma 1
                        8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/434,000A
                                                                                                                                                                                                                                                                                                                                                                                       Sequence 14, Application US/08434000A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 90071

COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5" Diskette, 1.

MEDIUM TYPE: Storage
                                                                                                                                                                                                                                     GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                119 GEGYYFDYWGQGTTLTVSS 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34,613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION: TELEPHONE: (619) 552-8400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM: IBM P.C. SOFTWARE: Word Perfect 5.1
82.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match

Best Local Similarity 83.5%;
Matches 116; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM Compatible OPERATING SYSTEM: IBM P.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Guise, Jeffrey W. REGISTRATION NUMBER: 34, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX: 67-3510
TELEX: SEQUENCE LISTING
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (619) 552-0159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    132 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
TOPOLOGY: DESCRIPTION:
  Best Local Similarity 82.7
Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Ly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  U.S.A.
                                                                                                                                                                                                                                                                                                                                                                       JS-08-434-000A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-434-000A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: Ca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX:
                                                                                                                                                                                          61
                                                                                                                                                                                                                                       121
                                                                                                                                                                                          요
                                                                                                                                                    ઠે
                                                                                                                                                                                                                                       8
```

```
61 GKSLEWIGYIYPYNGNTYYNGKFKNKATLTVDNSSTSAYMELRSLTSEDSAVYCAT--- 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 ĠKSLEWIĠYIYPYNĠNTYYNQKPKNKATLTVDNSSTSAYMELRSLTSEDSAVYYCAT--- 117
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: ANDREW C. HIATT, JULIAN
R.-C. MA, THOMAS LEHNER
TITLE OF INVENTION: IMMUNOSLOBULINS CONTAINING PROTECT
PROTEINS IN PLANTS AND THEIR USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DESCRIPTION: Guy'8 13 Gamma SEQUENCE DESCRIPTION: SEQ ID NO: 14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 80.9%; Score 613.5; DB 2; Best Local Similarity 83.5%; Pred. No. 3e-56; Matches 116; Conservative 6; Mismatches 10;
```

```
US-08-116-778E-1
                                                                  S-08-116-778E-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MEWTWVFLFILSGTAGVHSGVQLQQSGPDLVKPGASVKISCKASGYTFTDYNIHWVKQSR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7;
                                                                                                                                                                                                                                                                                                                                                         APPLICANT: ANDREW C. HIATT, JULIAN
K.-C. MA, THOMAS LEHNER
TITLE OF INVENTION: IMMUNOGLOBULINS CONTAINING PROTECTION
PROTEINS IN PLANTS AND THEIR USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 613.5; DB 2; Length 132;
Pred. No. 3e-56;
6; Mismatches 10; Indels 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Guy's 13 Gamma 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
SOFTWARE: WOLD BY C. DOS 5.0
SOFTWARE: WOLD BY C. DOS 5.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/717,888
FILING DATE: 20-No. 6008709-2000
CLASSIFICATION DATA:
APPLICATION NUMBER: US/08/434,000
FILING DATE: «UNKNOWN»
APPLICATION NUMBER: US/08/434,000
FILING DATE: «UNKNOWN»
APPLICATION NUMBER: US/08/434,000
FILING DATE: 30-Dec-94
ATTORNEY/AGRAT INFORMATION:
NAME: Guise, Jeffrey W.
REGISTRATION NUMBER: 34,613
REFERENCE/DOCKET NUMBER: 212/127
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
TELECOMMUNICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 90071
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DESCRIPTION: Guy's SEQUENCE DESCRIPTION: SEQ ID NO: 14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
Suite 4700
                                                                                                                                                                                                                                                    Sequence 14, Application US/09717888 Patent No. 6808709 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE LISTING
INFORMATION FOR SEQ 1D NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 132 amino acida
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118 ----YFDYWGQGTTLTVSS 132
121 GSGYYFDYWGQGTTLTVSS 139
                                                                  118 ----YFDYWGQGTTLTVSS 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 83.5%;
Matches 116; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: 67-3510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-717-888-14
                                                                                                                                                                                  RESULT 10
US-09-717-888-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                              g
ठ
```

```
OD: BY SIMILARITY
OD: WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
OD: CONSENSUS
/product= "HYPERVARIABLE REGION 3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DD: CONSENSUS /
/product= "HYPERVARIABLE REGION 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OD: CONSENSUS /product= "HYPERVARIABLE REGION 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WITH KNOWN SEQUENCE OR TO AN ESTABLISHED CONSENSUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: A PACHILIN Release #1.0, Version #1.25
SOFTWARE: PACHILIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/116,778E
FILING DATE: 07-SEP-93
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: WILSON, WARY J.
REGISTRATION NUMBER: 32,955
REPREBUNE: (70.3) 816-4000
TELECHOMMUNICATION INFORMATION:
                                                                                                                           APPLICANT: NATAMURA, KAZUYASU
APPLICANT: KOTKE, WASAMICHI
APPLICANT: SHITARA, KENYA
APPLICANT: HANAI, NOBUO
APPLICANT: KUWANA, YOSHIHISA
APPLICANT: HASEGAWA, MAMORU
APPLICANT: HASEGAWA, MAMORU
NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD CITY: ARLINGTON STATE: VIRGINIA
Sequence 1, Application US/08116778E Patent No. 5830470 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (703)816-4100
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 139 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: 1100 acids TOPOLOGY: 1100 acids OLBOTTON ACIDS AMINO ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACIDS ACI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: 50..66
IDENTIFICATION METHOD: B
IDENTIFICATION METHOD: W
IDENTIFICATION METHOD: W
IDENTIFICATION METHOD: W
OTHER INFORMATION: /prod
FEATURE:
NAME/KEY: domain
LOCATION: 99..109
IDENTIFICATION METHOD: B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: domain
LOCATION: 31..35
LDENTIFICATION METHOD: 1
IDENTIFICATION METHOD: 0
IDENTIFICATION METHOD: 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: 819_peptide
LOCATION: -19..-1
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (703)816-4100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
OTHER INFORMATION: /pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION:
FEATURE:
NAME/KEY: domain
```

79.7%; Score 604; DB 1; Length 139;

```
Sequence 91, Application US/08483528B Patent No. 5939532 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 YYGYMFAYWGQGTLVTVSA 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          703)816-4000
                                                             NAME/KEY: domain
LOCATION: 50..66
LIDENTIFICATION METHOD: 1
IDENTIFICATION METHOD: 1
IDENTIFICATION METHOD: 0
                                                                                                                                                                                                                      LOCATION: 99.109
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 82.77
Matches 115; Conservative
      IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (703)816-4100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (703)816-4101
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
LENGTH: 139 amino acio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: U.S.A.
ZIP: 22201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & V
STREET: 1100 NORTH G
CITY: ARLINGTON
                                                                                                                                                                OTHER INFORMATION:
                          OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 0
CLASSIFICATION:
                                                                                                                                                                                                     NAMB/KEY:
                                                                                                                                                                                                                                                                                                                        JS-08-438-562-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                       61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                              61 GKSLEWIGYIYPNNGGTGYNQKFKSKATLIYDKSSSTAYMELHSLTSEDSAVYYCATYGH 120
                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                          ö
                                                           1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTF
                        18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
SOFTWARE: PatentIn Release #1.0, Version #1.25
APPLICATION DATA:
APPLICATION NUMBER: US/08/438,562
FILING DATE: 10-MAY-95
CLASSIFICATION: 424
82.7%; Pred. No. 3.2e-55;
tive 6; Mismatches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WITH KNOWN SEQUE
ESTABLISHED CONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: HANAI, NOBUO
APPLICANT: KUWANA, YOSHIHISA
APPLICANT: HASEGAWA, MAMORU
TITLE OF INVENTION: HUMANIZED ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/116,778
FILING DATE: 07-SEP-93
CLASSIFICATION: 424
ATTONERY/AGENT INFORMATION:
NAME: WILSON, MARY J.
REGISTRATION NUMBER: 32,955
REFERENCE/DOCKET NUMBER: 249-76
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY SIMIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: U.S.A.
ZIP: 22201-4114
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
TYPE: Floppy disk
Floppy DEC-DOS/MS-F
                                                                                                                                                                                                                    121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/08438562
Patent No. 5874255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1100 NORTH GLEBE ROAD
                                                                                                                                                                                                                                                         121 YYGYMFAYWGOGTLVTVSA 139
                                                                                                                                                                                                                                                                                                                                                                                                                       NAKAMURA, KAZUYASU
                                                                                                                                                                                                                                                                                                                                                                                                                                          KOIKE, MASAMICHI
SHITARA, KENYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : 139 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: Big_peptide
LOCATION: -19...1
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
Best Local Similarity 82.7
Matches 115, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION: 31..35
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: domain
LOCATION: 31..35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                          셤
                                                                                                                                       8
                                                                                                                                                                                                                      Š
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GKSLEWIGYIYPNNGGTGYNQKFKSKATLTVDKSSSTAYMELHSLTSEDSAVYYCATYGH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MGWSWIFLFLLSGTAGVLSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMDWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapa
                                                                                                            BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                               BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79.7%; Score 604; DB 1; Length 139; 82.7%; Pred. No. 3.2e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6; Mismatches 18; Indels
/product= "HYPERVARIABLE REGION 1"
                                                                                                                                                                                                /product= "HYPERVARIABLE REGION 2"
                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: /product= "HYPERVARIABLE REGION 3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
PLICATION NUMBER: US/08/483,528B
FILING DATE: 07-JUN-95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: NAKAMURA, KAZUYASU
APPLICANT: KOIKE, MASAMICHI
APPLICANT: SHITARA, KENYA
APPLICANT: HANAI, NOBUO
APPLICANT: HASEGAWA, MAMORU
TITLE OF INVENTION: HUMANIZED ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1100 NORTH GLEBE ROAD
                                                                                                                                                                                                                                                                                                                                                                              CONSENSOS
```

```
US-08-116-778E-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
US-08-438-562-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GKSLEWIGYIYPNNGGTGYNQKFKSKATLTVDKSSSTAYMELHSLTSEDSAVYYCATYGH 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIFLFLLSGTAGVLSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNWDWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                      BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN
                                                                                                                                                                                                                                                                                         BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                            BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                    BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79.7%; Score 604; DB 1; Length 139; 82.7%; Pred. No. 3.2e-55; ive 6; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IDENTIFICATION METHOD: CONSENSUS
OTHER INFORMATION: /product= "HYPERVARIABLE REGION 3"
                                                                                                                                                                                                               /product= "HYPERVARIABLE REGION 1"
                                                                                                                                                                                                                                                                                                                                                /product= "HYPERVARIABLE REGION 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/116,778E
                                                                            ESTABLISHED CONSENSUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: NAKAMURA, KAZUYASU
APPLICANT: KOIKE, MASAMICHI
APPLICANT: SHITARA, KENYA
APPLICANT: HANAI, NOBUO
APPLICANT: HASEGAWA, MAMORU
TITLE OF INVENTION: HUMANIZED ANTIBODIES
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 22201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                               CONSENSUS
                                                                                                                                                                                                                                                                                                                                  CONSENSUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 3, Application US/08116778E Patent No. 5830470 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 YYGYMFAYWGOGTLVTVSA 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GSGYYFDYWGOGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: 99..109
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 82.7
Matches 115, Conservative
                                                                                                                                                                                                                                                                       LOCATION: 50..66
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                                                                                                    LOCATION: 31..35
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                          IDENTIFICATION METHOD: IDENTIFICATION METHOD:
sig_peptide
                    LOCATION: -19...1
IDENTIFICATION METHOD:
                                                                                                                                                                                                               OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                          domain
                                                                                                                    domain
                                                                                                                                                                                                                                                       domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: ARLINGTON STATE: VIRGINIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: U.S.A. ZIP: 22201-4714
                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-483-528B-91
                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-116-778E-3
  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 GKSLEWIGYIYPNNGGTGYNQKFKSKATLTVDKSSSTAYMELHSLTSEDSAVYYCAR--A 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MGWSWIFLFLLSGTAGVLSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMDWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Сарв.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MAME/KEX: domain
LOCATION: 99..107
LDENTIFICATION METHOD: BY SIMILARITY
IDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESTABLISEHD
IDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO ON ESTABLISEHD
IDENTIFICATION METHOD: CONSENSUS
OTHER INFORMATION: /product= "HYPERVARIABLE REGION 3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY
WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
CONSENSUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .,
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.3%; Score 586; DB 1; Length 137; 82.7%; Pred. No. 2.3e-53; ive 5; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DD: CONSENSUS
/product= "HYPERVARIABLE REGION 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OD: CONSENSUS _ TRYPERVARIABLE REGION 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 3, Application US/08438562;
Patent No. 5874255;
GENERAL INFORMATION:
APPLICANT: NAKAMURA, KAZUYASU
APPLICANT: KOITE, NASAMCHI
APPLICANT: SHITARA, KENYA
APPLICANT: KUWANA, YOSHHISA
APPLICANT: KUWANA, YOSHHISA
APPLICANT: HASEGAWA, MAMORU
ITILB OF INVENTION: HUMANIZED ANTIBODIES
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: WILLSON, MARY 32,955
REGISTRATION NUMBER: 32,955
REFERENCE/DOCKET NUMBER: 249-5
TELECHOMULICATION INFORMATION:
TELEPHONE: (703)816-4000
TELEPHONE: (703)816-4100
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISICS:
LENGTH: 137 amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 GSGYYPDYWGOGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   119 GRYYYAWDWGQGTLVTVSA 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAWE/KEY: domain
LOCATION: 31..35
LOCATION: 31..35
LDENTIFICATION METHOD: B
IDENTIFICATION METHOD: W
IDENTIFICATION METHOD: OTHER INFORMATION: /prod
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: domain
LOCATION: 55..66
IDENTIFICATION METHOD: B
IDENTIFICATION METHOD: CIDENTIFICATION METH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: -19...-1
IDENTIFICATION METHOD: IDENTIFICATION METHOD: IDENTIFICATION METHOD: PEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 82.7
Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION:
```

9

```
61 GKSLEWIGYIYPNNGGTGYNQKPKSKATLTVDKSSSTAYMELHSLTSEDSAVYYCAR--A 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED CONSENSUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , IDENTIFICATION METHOD: BY SIMILARITY
; IDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESTABLISEHD
; IDENTIFICATION METHOD: CONSENSUS
; OTHER INFORMATION: /product= "HYPERVARIABLE REGION 3"
US-08-483-528B-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BY SIMILARITY
WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
CONSENSUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IDENTIFICATION METHOD: CONSENSUS
OTHER INFORMATION: /product= "HYPERVARIABLE REGION 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: /product= "HYPERVARIABLE REGION 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIREEL: ILLO NORTH GLEBE KOLD
CITY: ARLINGTON
STATE: VIRGINIA
COMPUTER: US.A.
ZIP: 22201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: RIOPRY disk
COMPUTER: READABLE FORM:
MEDIUM TYPE: RIOPRY disk
COMPUTER: PER POCHOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/483,528B
FILING DATE: 07-JUN-95
CLASSIFICATION NUMBER: US/08/483,528B
FILING DATE: (703)816-4000
TELESPAX: (703)816-4100
INFORMATION FOR EQ ID NO: 93:
SEQUENCE CRARACTERISTICS:
LENGTH: 137 amino acids
TYPE: amino acids
TYPE: maino acids
TYPE: MINORALINE: Protein
FRANTURE:
MANAFYER: STOTEST
                                                                                                                                                                                                                                                                             APPLICANT: NAKAMURA, KAZUYASU
APPLICANT: KOIKE, MASAMICHI
APPLICANT: SHITARA, KENYA
APPLICANT: HANAI, NOBUN
APPLICANT: HASEGAWA, MAMORU
TITLE OF INVENTION: HUMANIZED ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD
                                                                                                                                                                                                               Application US/08483528B
                                               121 GSGYYFDYWGQGTTLTVSS 139
                                                                                           119 GRYYYAWDWGOGTLVTVSA 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
NAME/KEY: domain
LOCATION: 55..66
IDENTIFICATION METHOD: B
IDENTIFICATION METHOD: W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PEATURE:
NAME/KEY: domain
LOCATION: 99.1107
IDENTIFICATION METHOD: 9
IDENTIFICATION METHOD: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: -19...-1
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: 31..35
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: 819_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: domain
                                                                                                                                                                                       -483-528B-93
                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GKILEWIGYIYPYNGVSDYNQNPKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MGWSWIFLFLLSGTAGVLSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMDWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIFLFLLSGTAGVHSEVOLOQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: domain
LOCATION: 55..66
LDENTIPICATION WETHOD: BY SIMILARITY
LDENTIPICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
LDENTIFICATION METHOD: CONSENSUS
OTHER INFORMATION: /product= "HYPERVARIABLE REGION 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WITH KNOWN SEQUENCE OR TO AN ESTABLISHED CONSENSUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OD: BY SIMILARITY
OD: WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
OD: CONSENSUS
//product= "HYPERVARIABLE REGION 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OD: BY SIMILARITY
OD: WITH KNOWN SEQUENCE OR TO AN ESTABLISEHD
OD: CONSENSUS
/producte "HYPERVARIABLE REGION 3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            77.3%; Score 586; DB 1; Length 137; 82.7%; Pred. No. 2.3e-53; ive 5; Mismatches 17; Indels
                                                                                                       CONTEXT: ALLIANDION
CONTEXT: ALLIANDION
CONTEXT: U.S.A.
ZIP: Z2201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Betentin Release #1.0, Version #1.25
CURENT APPLICATION DATA:
APPLICATION NUMBER: US/08/438,562
FILING DATE: 10-MAY-95
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: WILSON, MARY J.
REGISCHATION NUMBER: 32,955
REGISCHATION NUMBER: 249-76
TELERDHOMINICATION INFORMATION:
NAME: WILSON, MARY J.
REGISCHANICATION NUMBER: 249-76
TELERDHOME: (703)816-4100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPAX: (703)816-320
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHRACTERISTICS:
LENGTH: 137 amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: 81g_peptide
LOCATION: -19...1
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: domain
LOCATION: 31..35
IDENTIFICATION METHOD: B
IDENTIFICATION METHOD: V
IDENTIFICATION METHOD: V
OTHER INFORMATION: /proc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTIFICATION METHOD: IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: domain
LOCATION: 99..107
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 82.7
Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: protein
                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION:
NUMBER OF SEQUENCES:
                                                                  STREET: 1100 NC CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-438-562-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
```

셤 ઠે

ò

```
TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-436-717-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                               61 GKSLEWIGYIYPNNGGTGYNQKFKSKATLTVDKSSSTAYMELHSLTSEDSAVYYCAR--A 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GKSLEWIGYIDPYTGGTGYNQKFNDKATLIYDKSSSTAFWHLNSLTSEDSAVYYCAR--- 117
                                                                                                                                                                                      GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                       1 MGWSWIFLFILLSGTAGVLSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNWDWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MGWSWIFLELSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 158, Application US/09647468

Sequence 158, Application US/09647468

Patent No. 6677436

GENERAL INFORMATION:
APPLICANT: SATO, KOH
APPLICANT: AABUTA, NAOHIRO
TITLE OF INVENTION: HUMANIZED ANTIBODY AGAINST HUMANIZED ANTIBODY
TITLE OF INVENTION: PROCESS OF PRODUCTION OF THE HUMANIZED ANTIBODY
TITLE OF INVENTION: HUMBER: US/09/647,468

CURRENT PELING DATE: 1999-04-02

PRIOR APPLICATION NUMBER: PCT/JP99/01768

PRIOR FILING DATE: 1999-04-03

PRIOR FILING DATE: 1998-04-03

PRIOR FILING DATE: 1998-04-03

NUMBER OF SEQ ID NOS: 183

SOFTWARE: PATENTING UNIVER: 2.1

SEQ ID NO 158

LENGTH: 137
                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Description of Artificial Sequence: Nucleotide; OTHER INFORMATION: sequence coding for H chain V region of ant-TF; OTHER INFORMATION: mouse monoclonal antibody ATR-8
                                                   5
Query Match
77.3%; Score 586; DB 1; Length 137;
Best Local Similarity 82.7%; Pred. No. 2.3e-53;
Matches 115; Conservative 5; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
74.9%; Score 568; DB 2;
Best Local Similarity 75.4%; Pred. No. 1.7e-51;
Matches 107; Conservative 11; Mismatches 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-137-117D-27
; Sequence 27, Application US/08137117D
; Patent No. 5795965
; Patent No. 5795965
; GENERAL INFORMATION:
APPLICANT: TSUCHIYA, Masayuki
; APPLICANT: SATO, Koh
; APPLICANT: BENDIG, Mary
; APPLICANT: UONES, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GSGYYFD---YWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |:|:| :|||| ||||||:||||:
118 --GFYYDYDCYWGQGTLVTVSA 137
                                                                                                                                                                                                                                                                                     121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                119 GRYYYAWDWGQGTLVTVSA 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT ORGANISM: Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-647-468-158
                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                        셤
                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                               셤
                                                                                                 ઠે
                                                                                                                                                                                           ò
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSGIFLFLLSGTAGVHSEIQLQQSGPELMKPGASVKISCKASGYSFTSYYIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 567; DB 1; Length 135;
Pred. No. 2.2e-51;
8; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 27, Application US/08436717
Patent No. 5817790
GENERAL INFORMATION:
APPLICANT: TSUCHIYA, Masayuki
APPLICANT: SATO, Koh
APPLICANT: BENDIG, Mary
APPLICANT: SALDANHA, Jose
APPLICANT: SALDANHA, Jose
TITLE OF INVENTION: RESHAPED HUMAN ANTIBODY TO HUMAN
TITLE OF INVENTION: RESHABED HUMAN ANTIBODY TO HUMAN TITLE OF INVENTION: INTERLEUKIN-6 RECEPTOR NUMBER OF SEQUENCES: 158
CORRESPONDENCE ADDRESS:
ADDRESSEE: FOLOW.
                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTAARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/137,117D
FILING DATE: 20-DEC-1993
CLASSIFICATION NUMBER: WO PCT/JP92/00544
FILING DATE: 24-APR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: UP 4-32084
FILING DATE: 19-FEB-1992
PRIOR APPLICATION NUMBER: UP 3-95476
FILING DATE: 25-APR-1991
ATORNEY/AGENT INFORMATION:
NAME: WEGNER, Harold C.
REGISTRATION NUMBER: 53-466/126/AAOK
TELECOMMUNICATION NUMBER: 53-66/126/AAOK
TELECOMMUNICATION NUMBER: 53-66/126/AAOK
                                                                                                                                                                                        ADDRESSEE: Foley & Lardner
STREET: 3000 K Street, N.W., Suite 500
STATE: 0.C.
COUNTRY: USA
ZIP: 2000/5109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118 -GGNRFAYWGQGTLVTVSA 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 27: SEQUENCE CHARACTERISTICS: LEWGTH: 135 amit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Y4.8%;
Best Local Similarity 78.4%;
Matches 109; Conservative 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (202) 672-5300
TELEFAX: (202) 672-5399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , MOLECULE TYPE: protein US-08-137-117D-27
```

9 9

```
Search completed: March 20, 2006, 07:31:35 Job time : 8.40237 secs
                                                             94105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCT-US93-11612-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSGIFLFLLSGTAGVHSBIQLQQSGPBLMKPGASVKISCKASGYSFTSYYIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3: Townsend and Townsend Khourie and Crew
One Market Plaza, Steuart Tower, Suite 2000
                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.30
URRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/436,717
INTERLEUKIN-6 RECEPTOR: 158
                                                                                                                                                                                                                                                                                                                                   CLASSIPTCATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/137,117
FILING DATE: 20-DEC-1993
APPLICATION NUMBER: WO PCT/JP92/00544
FILING DATE: 24-APR-1992
RILING DATE: 24-APR-1992
REIGHTON NUMBER: JP 4-32084
FILING DATE: 19-FEB-1992
REIGHTON NUMBER: JP 3-95476
FILING DATE: 19-APR-1991
ATTORNEY/AGENT INFORMATION:
NAME: WEGNER, HAROLD C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 25,258
REFERENCE/DOCKET NUMBER: 53466/126/AAOK
ELECOMMUNICATION INFORMATION:
                                                           E: Foley & Lardner
3000 K Street, N.W., Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118 -GGNRFAYWGQGTLVTVSA 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /AGENT INC...
WEGNER, Harold C.
                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74.8%;
78.4%;
                                                                                                                                     COUNTRY: USA
ZIP: 20007-5109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (202) 672-5300
(202) 672-5399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: 904136
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 135 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 74.8
Best Local Similarity 78.4
Matches 109; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 1:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend
  TILE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-436-717-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GQGLEWIGYIYPYNDGTKYNEKFKGKATLTSDKSSSTAYMELSSLTSEDSAVYYCAREEY 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MEWSWIFLFLLSGTAGVHSEVQLQQSGPDLVKPGASVKMSCKASGYTFTSYVMHWVKQKP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indela
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: Patentin Release #1.0, Version #1.25
GURRANT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/11612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 566.5; DB 4
Pred. No. 2.6e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11; Mismatches
                                                                                                                                                                    FILING DATE:
CLASCIPICATION:
PRIOR APPLICATION DATA:
PRECICATION NUMBER: US 07/983,946
FILING DATE: 01-DEC-1992
ATTORNEY/AGENT INFORMATION:
NAMME: Smith, William M.
REGISTRATION NUMBER: 30,223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GSGY-YFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GNYVRYPDVWGAGTTVTVSS 140
                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 74.7% Best Local Similarity 77.1% Matches 108; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
```

THIS PAGE BLANK (USPTO)

Murine 19
Anti-huma
Anti-huma
Anti-huma
Murine in
DREG-200
Murine CMV
Mouse CMV
Pl2-h2. 3
Murine mo
Chimeric
Anti-huma

Mouse amy Mouse 19/

Title: Perfect score:

Sequence:

OM protein

ё 6

Run

Scoring table:

Searched:

Minimum DB E Maximum DB E

Database

Fragment
Anti-huma
Anti-huma
Mouse/hum
Mouse vir
Plasmid p
Amino aci
Murine MA
Murine MA
Thrombopo
Pragment
Thrombopo
Pragment
334 antib

Monoclona MAb Co-1 Mouse Co-Mouse ant Antibody Heavy cha Heavy cha Mammalian

Abg76352
Abg76352
Abg76352
Abg76352
Abg76386
Abg71886
Abb12918
Abb12918
Abb12918
Abb12918
Abb12917
Abb125554
Abb12865
Abb12917
Abb13555
Abb13555
Abb13555
Abb13555
Abb13555
Abb13555
Abb13555
Abb13555
Abb13555
Abb13555
Abb13555
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb13556
Abb1356
Abb1357088
Abb13536
Abb235307
Abb235307
Abb235307
Abb235307
Abb235307
Abb235307
Abb235307
Abb235307
Abb235307
Abb235307
Abb235307
Abb235307
Abb235307
Abb23531

Cimeric a Murine 12 Mouse MAb Human/mou

Chimeric Heavy cha Murine 12 Murine 12

Mouse par A77 anti-A77 anti-Murine A7 Murine A8 Fragment Fragment Heavy cha Humanised Murine mA

Amino aci Murine MA Mouse MAB

Plasmid p

Score

Result

Thrombopo Mouse SM5 Novel chi

SMS-1 chi Novel chi chSMVH/Fc

```
The present invention describes an isolated antibody, or an antigenbinding antibody fragment (I), that preferentially binds cell-associated binding antibody fragment (I), that preferentially binds cell-associated CR 125/0772 polypeptide relative to shed CA 125/0772 polypeptide. Also described: (I) a monoclonal antibody that competes with binding of (II); (3) a hybridoma as deposited in (II); (4) an isolated nucleic acid molecule (III) comprising a nucleotide sequence that encodes a variable chain region of (I); (5) a pharmaceutical composition comprising an antibody or an antigen-binding antibody fragment that preferentially binds cell-associated CA 125/0772P polypeptide, and a carrier; (6) a pharmaceutical composition comprising on antibody or an antigen-binding monoclonal antibody or an antigen-binding monoclonal antibody or an antigen-binding material and a composition comprising an antibody, or an antigen-binding material and a composition of manufacture (IV) comprising packaging material and a composition of manufacture (IV) comprising packaging material and a composition of preferentially binds cell-associated CA 125/0772P relative to shed CA 125/0772P operably linked to a neterologous attibody fragment, which preferentially binds cell-associated CA 125/0772P relative to shed CA 125/0772P operably linked to a heterologous attibody fragment, (9) ameliorating (MI) a symptom of a CA 125/0772P-relative disorder; (10) a monoclonal antibody (VI) fonemer of CA 125/0772P-relative disorder (10) asymptom of a CA 125/0772P-relative (10) asymptom of a CA 125/0772P-relative (10) asymptom of a CA 125/0772P-relative (10) asymptom of a CA 125/0772P-relative (10) asymptom of a CA 125/0772P-relative (10) CA 125/0772P-relative (10) CA 125/0772P-relative (10) 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel isolated antibody, or antigen-binding antibody fragment binding with cell-associated CA 125/0772P polypeptide relative to shed CA 125/0772 polypeptide, useful for ameliorating cervical or ovarian cancer.
Novel chi
chSMVH/Fc
Novel chi
                                                                                                                                                                                                                                                                                                                                                                                                antibody; antigen-binding antibody fragment; cell-associated CA 125/0772P; monoclonal antibody; cytostatic; immunostimulant; mediator of 1981s; tumour; cell proliferative disorder; cancer; cervical cancer; uterine cancer; breast cancer; lung cancer;
                                                                                                                                                                                                                                                                                                                                                         Antibody 776.1 heavy chain variable region (776.1H) SEQ ID NO:34.
Adv98549 R
Adv92488 Adv98551 R
                                                                                                                ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 38; SEQ ID NO 34; 153pp; English
ADV98549
ADV92488
ADV98551
                                                                                                                                                                                                                         ADS94335 standard; protein; 139 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-OCT-2002; 2002US-0418828P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-OCT-2003; 2003WO-US032945
      თთთ
                                                                                                                                                                                                                                                                                                                (first entry)
  624
639
639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (EURO-) EUROCELTIQUE SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Albone EF, Soltis DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2004-357171/33.
N-PSDB; ADS94342.
    71.271.271.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2004035537-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ovarian cancer
                                                                                                                                                                                                                                                                                                                02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-APR-2004.
    539.5
539.5
539.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                             RESULT 1
ADS94335
    860
```

```
ô
antibody fragment; (11) an antibody or antigen binding antibody fragment that competes with (VI) and (12) a pharmaceutical composition comprising (VI) and acarier. (11) has cytostatic activity, and can be used as an immunostimulant and a mediator of lysis of positive tumour cell. (1) is useful for ameliorating a symptom of a CA 125/O7P-related disorder which is a cell proliferative disorder such as cancer, cervical or uterine cancer, breast or lung cancer or ovarian cancer. (V) is useful diagnostically for monitoring the development or progression of cancer or tumour as part of clinical testing procedure. The present sequence represents an antibody heavy chain variable region amino acid sequence which is used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                  61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence represents a variable region of the heavy chain of an anti-Fas antibody. The constant region of the heavy chain is derived from human immunoglobulin G (IgG). The anti-Fas antibody can be used for the treatment and diagnosis of autoimmune diseases
                                                                                                                                                                                                                                                                                                                                   ၀
                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                           1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                         GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF
                                                                                                                                                                                                                                                                                                                                   1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      encoding, e.g. variable region of anti-Fas antibody - useful for. diagnosis and treatment of auto-immune diseases.
                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           variable region; heavy chain; anti-Fas antibody; human; mouse;
immunoglobulin G; IgG; light chain; treatment; diagnosis;
autoimmune disease.
                                                                                                                                                                                                                                                            100.0%; Score 758; DB 8; Length 139; 100.0%; Pred. No. 6.9e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Variable region of an anti-Fas antibody heavy chain.
                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (IGAK-) IGAKU SEIBUTSUGAKU KENKYUSHO KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW60866 standard; protein; 135 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 7; Page 13; 16pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97JP-00191769.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96JP-00172228
96JP-00268737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.0
Matches 139; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1998-406105/35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; AAV37264.
                                                                                                                                                                                                                                Sequence 139 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JP10165178-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-JUL-1996;
09-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW60866;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW60866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
```

Sequence 135 AA;

GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120

61

```
ઠ
                                                                                                                                                 8XCCCCCCCCCX8X4FXBXXBXBXBXBXBXBXFFFFFFFFFFFFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fas antigen, and controls and induces apottosis in cells which expressed amino acid sequences obtained from a mammal other than human, other regions contain amino acid sequences from human and they partly contain modified amino acids equences from human and they partly contain modified amino acids equences from human and they partly contain reating and/or diagnosing autoimmune diseases. The present sequence represents an immunoglobulin M chimeric antibody heavy chain variable region from an example from the present invention
                                                                                                    GKSLEWIGYIYPYNGGTGYNQKFKSKATLIVDNSSSTAYMELRSLTSEDSAVYYCAR--- 117
                                                                                       GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes a recombinant antibody (A) which binds to
                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel recombinant antibody used for treating and diagnosing autoimmune diseases - is humanized anti-Fas antibody which controls and induces apoptosis in cells expressing fas antigen.
                                                                1 MGWSWIFLFFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH
                                           1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                       Gaps
                                                                                                                                                                                                                                                                                                          Humanised; anti-Fas antibody; mouse hybridoma; autoimmune disease;
diagnosis; CDR; complementarity determining region; apoptosis;
                        4
                                                                                                                                                                                                                                                                                   chimeric antibody heavy chain variable region SEQ ID NO:1,
 Length 135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 135;
                      8; Indels
Score 644; DB 2;
Pred. No. 2.5e-46;
5; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 644; DB 3;
Pred. No. 2.5e-46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (IGAK-) IGAKU SEIBUTSUGAKU KENKYUSHO KK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 9-10; 25pp; Japanese.
                                                                                                                                                                                                                AAY80293 standard; protein; 135 AA.
                                                                                                                                                         -SYYAMDYWGQGTSVTVSS 135
                                                                                                                                  121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                     98JP-00204318
85.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         98JP-00204318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85.0%;
                                                                                                                                                                                                                                                             (first entry)
                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-199626/18.
          122; Conserv
                                                                                                                                                                                                                                                                                                                                immunosuppressive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAZ95282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 135 AA;
                                                                                                                                                                                                                                                                                                                                                                                       JP2000014383-A.
                                                                                                                                                                                                                                                              30-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                             18-JAN-2000
                                                                                                                                                                                                                                                                                                                                                       Mus sp.
Synthetic.
Query Match
Best Local S
Matches 122
                                                                                       61
                                                                                                                                                                                                                                        AAY80293;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                    셤
                                                                                       ઠે
                                                                                                        셤
                                                                                                                                                     셤
                                                                                                                                  ò
```

```
This sequence represents the heavy chain of the protein of the invention. The protein of the invention is a recombinant protein (A), that comprises at least one region corresponding to an immunoglobulin (Igy variable region which enables the protein to recognise and specifically bind to an antigen, preferably human Fas, and has substantially no more immunogenicity in a human patient than a human antibody. The proteins are useful for treating autoimmune diseases, especially rheumatism (rheumatoid arthritis). (A) is based on a murine monoclonal antibody. As the protein lacks the constant region, it has substantially no more immunogenicity in the human patient than a human antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MGWSWIFLFLEGGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fas; antibody; human; immunoglobulin; variable region; rheumatism; autoimmune disease; rheumatoid arthritis; therapy; CDR; heavy chain; complementarity determining region.
61 GKSLEWIGYIYPYNGGTGYNQKFKSKATLTVDNSSSTAYMELRSLTSEDSAVYYCAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Anti-Fas recombinant antibodies - useful for treating auto-immune diseases, especially rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 590;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nakahara K, Yonehara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85.0%; Score 644; DB 2;
llarity 87.8%; Pred. No. 1.2e-45;
Conservative 5; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                           H chain subunit of Fas specific antibody

    19
    note= "signal peptide"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 11; Page 29-31; 72pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                           Ź
                                                           121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                    118 -SYYAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                           AAW31751 standard, protein; 590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97EP-00302415.
                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20. .590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Serizawa N, Ichikawa K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SANY ) SANKYO CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1997-482673/45.
N-PSDB; AAT88869.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 122; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 590 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-APR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                  15-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP799891-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   38-OCT-1997
                                                                                                                                                                                                                                                                                                                                       AAW31751;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein
                                                                                                                                                                                                            RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
```

9 9

Gaps

4,

8; Indels

5; Mismatches

Best Local Similarity 87.6 Matches 122, Conservative

MGWSWIPLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH

a à

9 9

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                 1 MGWSWIFLFLISGIAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Anti-human Fas humanizing antibody-containing antirheumatic agents.
                                                                                                                                                                                                                                                                                                                    Anti-human Fas antibody CH11 H chain protein sequence SEQ ID #8
                                                                                                                                                                                                                                                                                                                                                 Antirheumatic agent; immunoglobulin M; IgM; apoptosis inducer; immunosuppression; autoimmune disease; treatment; rheumatism; anti-Fas antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 47-48; 109pp; Japanese.
                                                                                                                                                                                                                               AAB12908 standard; protein; 590 AA.
                                                                                                                       121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                     118 -SYYAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98JP-00264598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99JP-00263984
                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (SANY ) SANKYO CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-454476/40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 590 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; AAA78202
                                                                                                                                                                                                                                                                                                                                                                                                                                              JP2000154149-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-SEP-1999;
                                                                                                                                                                                                                                                                                           16-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                             AAB12908;
                                                                                                                                                                                                                                               셤
                                                                                           셤
                                                                                                                         ઠે
                                                                                                                                                  셤
                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Production of anti-Fas protein humanised antibodies - for use in inducing apoptosis on Fas expressing cells in the treatment of auto:immune diseases, especially rheumatoid arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This is the amino acid sequence of the heavy chain of the mouse anti-human Fas monoclonal antibody CHII, as deduced from an amplified CDNA clone (see AAV66735). The invention relates to novel humanised antibodies comprising humanised light and heavy chains (see AAW71876-81) of CHII. These humanised anti-human Fas antibodies are capable of inducing apoptosis in cells expressing Fas (e.g. synovicotytes) and are useful in the treatment of autoimmune disease and chronic rheumatoid arthritis
    GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                  --- 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                           Humanised antibody; Fas; CH11; monoclonal antibody; MAb; apoptosis; autoimmune disease; rheumatoid arthritis; therapy; human; mouse;
                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yonehara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 590;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 644; DB 2; Length 59
Pred. No. 1.2e-45;
5; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nakahara K,
                                                                                                                                                                                                                                                                Anti-human Fas monoclonal antibody CH11 heavy chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Takahashi T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 4; Page 58-60; 187pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                   1. 19
/label=_Sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mat_protein
                                                                                                                                                                          AAW71888 standard; protein; 590 AA
                                                                  139
                                                                                              135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85.0%;
ilarity 87.8%;
Conservative
                                                                                 -SYYAMDYWGQGTSVTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97JP-00067938
                                                                  GSGYYFDYWGQGTTLTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69. .84
/label= CDR2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98EP-00302113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50. .54
/label= CDR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118. .124
/label= CDR3
                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   20. .590
/label= Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (SANY ) SANKYO CO LID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Haruyama
                                                                                                                                                                                                                                                                                                                            antibody engineering.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-482965/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAV66735.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 590 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Simi:
Matches 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                    18-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-SEP-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Serizawa N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP866131-A2
                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                  121
                                                                                                                                                                                                      AAW71888
```

Peptide Protein Region Region Region

Key

AAW71888 ID AAW RESULT

셤

용 8

à

```
The present invention relates to antirheumatic agents which comprise as active ingredients an immunoglobulin M (IgM) protein. The IgM protein does not include a J segment, has apoptosis inducing activity, and does not include a J segment, has apoptosis inducing activity, and consists of a light and heavy chain polypeptide produced synthetically. The agents of the invention exhibit antirheumatic and immunosuppressive activity and can be used to treat autoimmune diseases, especially. The IgM molecule used in the invention has bluman Fas-antigen binding properties. Included in the invention are nucleotide sequences of the Immanised anti-human Fas Ig CH11 (see corresponding protein sequences (see AAA122013-sh2218 and AAB12219), and culleded are anti-human Fas antibody CDR peptides (AAB12902-B12907).

CC AAA78202-A78206) and protein sequences (see AAB12908-B12910). Also included are anti-human Fas antibody CDR peptides (AAB12902-B12907).

CC Frimers specific for the anti-human Fas antibody, 1184t, heavy and kappa chains used in the invention are represented by sequences AAA78277-A78318 and AAA78335-CC A78335, while humanised anti-Fas Ig DNA sequences AAA782738-A78387. Primer sequences AAA78212 are specific for murine Ig DNA, and are used in the production of the agent of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 644; DB 3; Length 590;
Pred. No. 1.2e-45;
5; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 87.8%;
Matches 122; Conservative
```

Gapa

4

1; Length 135; 15; 10; Indels

Score 625; DB 2; Pred. No. 9.7e-45; 7; Mismatches 10

```
Query Match
Best Local Similarity 84.9%;
Matches 118; Conservative
 Sequence 135 AA;
                                                                                                                                        셤
                                                                                                                                                                              ò
                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This is the amino acid sequence of the heavy chain of the M195 anti-CD33 antibody. This antibody selectively binds to surface of haematopoeitic progenitor cells (HPC) and is transported into the cells by endocytosis. The invention provides conjugates of human Fanconi anaemia complementation group C (FAC) protein (see AAW68546) and anti-CD33 antibody (preferably a single chain antibody). A nucleic acid (see AAW33947) encoding the heavy chain can be ligated with vector pED6 and with FAC cDNA (see AAW33945) to provide a fusion protein. Alternatively, nucleic acids encoding the heavy and light chains (see AAW68549) of M195 are ligated into a bicistronic vector, antibody molecule is isolated from transfected cells, and chemically crosslinked to FAC protein (see AAW68546) to form a conjugate. The conjugate or fusion protein, or a nucleic acid encoding it, can be used to deliver FAC to an HPC, specifically to inhibit apoptosis, particularly in patients exposed to high doses of chemotherapy for treatment of non-wyeloid cancers, also to treat Fanconi anaemia (by complementation of the genetic defect).

Treatment of HPC is done in vitro, ex vivo (e.g. for recombinant production of conjugate in cell cultures) or in vivo. Treatment with FAC may eliminate the need for extensive bone marrow transplants to restore
                                                                   GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                       GKSLEWIGYIYPYNGGTGYNOKFKSKATLTVDNSSSTAYMELRSLTSEDSAVYYCAR--- 117
 9
                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                 Panconi anaemia complementation group C; PAC; apoptosis; haematopoiesis; bone marrow; chemotherapy; gene therapy; CD33; antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 haematopoiesis after chemotherapy. (Updated on 27-AUG-2003 to correct OS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New conjugate of Fanconi anaemia molecule and peptide selective for haematopoietic precursor cells - inhibits apoptosis of these cells, for treating Fanconi anaemia and patients undergoing high-dose chemotherapy
                    1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; Page 50-51; 72pp; English.
                                                                                                                                                                                                                                                                    AAW68548 standard, protein; 135 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BGHM ) BRIGHAM & WOMENS HOSPITAL
                                                                                                                                                               -SYYAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                              Anti-CD33 antibody heavy chain.
                                                                                                                                        121 GSGYYFDYWGQGTTLTVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97US-0046546P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98WO-US009975
                                                                                                                                                                                                                                                                                                                                         (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-009774/01.
N-PSDB; AAV33947.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Youssoufian H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9851792-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-MAY-1997;
                                                                                                                                                                                                                                                                                                                                       27-AUG-2003
15-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-NOV-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer
                                                                                                                                                                                                                                                                                                      AAW68548;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia.
                                                                                                     61
                                                                                                                                                                              118
                                                                     61
                                                                                                                                                                                                                                RESULT 7
                                                                                             셤
                          名
                                                                   ઠે
                                                                                                                                        δ
                                                                                                                                                                            음
                                                                                                                                                                                                                                                                      8
```

```
The present invention describes a method of producing humanised coding a humanised involving expressing in a cell a nucleic acid encoding a humanised version of an immunoglobulin. This is obtained by comparing a donor and human immunoglobulin and producing a combined antibody which contains part of each. These are useful in the treatment of graft-versus-inset disease, transplant rejection, autoimmune diseases such as diabetes, rheumatoid arthritis, myasthenia gravis, multiple sclerosis and systemic lupus erythematosus, herpes infections, CWV virus infections and myeloid
                                                                                                                                                                                                                                                            Humanised immunoglobulin; mouse; human; antibody; heavy chain; diabetes; light chain; graft versus host disease; transplant; autoimmune disease; multiple sclerosis; rheumatoid arthritis; systemic lupus erythematosus; myasthenia gravis; herpes infection; myeloid leukaemia; CMV infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Producing humanized immunoglobulin, involves producing a cell containin
DNA segments encoding humanized heavy and light chain variable regions,
and expressing the DNA segments in the cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  leukaemia. The present sequence is an antibody used to demonstrate method of the invention
                                                                                                                                                                                                                           Murine M195 antibody heavy chain SEQ ID NO: 69.
                                                                                                                    AAB69682 standard; protein; 135 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 7; Pig 34; 145pp; English.
121 GSGYYFDYWGQGTTLTVSS 139
                  ||||||::||||
118 -GRPAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (PROT-) PROTEIN DESIGN LABS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       89US-00290975.
89US-00310252.
90US-00590274.
90US-00634278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       95US-00484537
                                                                                                                                                                                          30-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Queen CL, Selick HB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-190856/19.
N-PSDB; AAF58738.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 135 AA;
                                                                                                                                                                                                                                                                                                                                                                                     US6180370-B1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-FEB-1989;
28-SEP-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-DEC-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                      30-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-DEC-1988
                                                                                                                                                        AAB69682;
                                                                                                                                                                                                                                                                                                                                                   us sp
                                                                                 RESULT 8
AAB69682
```

```
118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR05090;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR05090
8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 \pm 8 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Designing humanized immunoglobulin chain comprises substituting human framework amino acids of acceptor immunoglobulin with corresponding amino acid from donor immunoglobulin at position in immunoglobulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention describes a method of designing a humanised immunoglobulin (1g) chain. The method comprises substituting human framework amino acids of the acceptor Ig with a corresponding amino acid from the donor Ig at a position in the Igs, where the amino acid is immediately adjacent to one of the CDR's or the amino acid is predicted to have a side chain atom whose Van der Waals surface is 3 angstroms from the CDR's in threedimensional Ig model and is capable of interacting with the antigen or
                                                                                                                                                                                                                    GKSLEWIGYIYPYNGGTGYNOKFKSKATLTVDNSSSTAYMDVRSLTSEDSAVYYCAR--- 117
                                                                                                                                                                                            GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                             1 MGMSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDXNMHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     humanised immunoglobulin; Ig; immunoglobulin; framework; acceptor Ig; donor Ig; CDR; complementarity determining region; interleukin-2; IL-2; IL-2 receptor; T-cell mediated disorder; mouse; M195 antibody; heavy chain variable region.
                                                                                                         MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                              Gaps
                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Coelingh KL;
                      Length 135;
                                                            10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mouse M195 antibody heavy chain variable region #2.
                    Score 625; DB 4;
Pred. No. 9.7e-45;
7; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Landolfi NF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Fig 41; 130pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                  ADO47773 standard; protein; 135 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schneider WP,
                                                                                                                                                                                                                                                                                 121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                       -GRPAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88US-00290975.
89US-00310252.
90US-00590274.
95US-00484537.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-JUN-1995; 95US-00484537
22-NOV-2000; 2000US-00718993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAY-2003; 2003US-00452357
                    Query Match
Best Local Similarity 84.9%;
Matches 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COELINGH K L. SELICK H E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCHNEIDER W P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-304235/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QUEEN C L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Co MS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; ADO47772.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US2004058414-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-DEC-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-FEB-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-SEP-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Queen CL,
Selick HE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADO47773;
                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (QUEE/) (COMS/) (SCHN/) (COEL/) (COEL/) (SELI/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                              AD04777
                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                               g
                                                                                                             ઠ
                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                         셤
```

```
cc with the CDR's of the humanised Ig that when the chain is a heavy chain, cc substituted amino acid(s) is capable of interacting with CDR's 2 or 3.

Also described are: an Ig comprising two light/heavy chains; a DNA sequence which upon expression encodes a humanised Ig chain; a composition comprising a DNA sequence coding for a composition comprising a DNA sequence coding for a composition comprising a pure humanised immunoglobulin cc capable of inhibiting pinding of human interleukin-2 (IL-2) to a human IL creceptor; treating to the patient a therapeutic dose of an Ig; and a composition comprising a pure humanised Ig reactive with the p75 chain of the human IL-2 receptor. The method is used for designing a humanised immunoglobulin chain, useful for treating T-cell mediated disorders in a human patient. The invented method produces an Ig chain that is easily can deconomically produced. This is the amino acid sequence of mouse M195 antibody heavy chain variable region. Residues in the human antibody to create framework can be replaced with residues from the mouse antibody to create
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GKSLEWIGYIYPYNGGTGYNQKFKSKATLIVDNSSSTAYMDVRSLTSEDSAVYYCAR--- 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Heavy chain variable domain of human chorion gonadotrophin-binding pptde.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MGWSWIFLFLISGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human chorionic gonadotropin; antibodies; heavy chain; choriocarcinoma; abortion; tumour detection; complementary determiming regions;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                     82.5%; Score 625; DB 8;
84.9%; Pred. No. 9.7e-45;
iive 7; Mismatches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR05090 standard; protein; 137 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -GRPAMDYWGQGTSVTVSS 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 70. .85
/label= CDR 2
118. .126
/label= CDR 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50. .54
/label= CDR 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             89EP-00202951.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pregnancyprevention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 118; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                Sequence 135 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (ALKU ) AKZO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Binding-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Binding-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Binding-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-NOV-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAR-2003
04-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-MAY-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EP370581-A.
```

Bos ES;

Vanwezenb PM,

```
|. .19
|abel= sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                 Claim 23; Page 131; 152pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                            Ź
                                                                                                                                                                                                                                                                                                                                             121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note= "claim 8"
                                                                                                                                                                                                                                                                                                                                                                                                                          AAR53328 standard; protein; 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "claim
                                                                                                                                                                                                      Query Match
Best Local Similarity 83.5%;
Matches 116; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50. .54
/label= CDR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDR2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118. .128
/label= CDR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93AU-00046181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92JP-00238452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69. .85
/label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KM-796 heavy chain.
                                                                                                                                                                                  Sequence 132 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-SEP-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AU9346181-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-MAR-1994
useful for mutans and
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR53328;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Region
                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                 AAR53328
                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rabbit; immunoglobulin; receptor; protection protein; mutans; heavy chain; antigen binding domain; protection; pathogen; mucosal; environment; gastrointestinal; passive; immunisation; Guy's 13 antibody; prevention; dental caries; Streptococcus; poly; gamma chain.
                                                                                                                     forms a hCH-binding antibody fragment (FhCG). For the production of Abs the variable region was fused to a constant region of human origin. The product can be used to prevent pregnancy or for combatting choritocarcinomas or other hCG-producing tumours. They also have diagnostic applications as immune reagents for in vivo diagnosis, eg for localisation of tumours and for in vitro diagnosis for detection of hCG in body fluids. (Updated on 25-MAR-2003 to correct PI field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Immunoglobulin and protection protein complex and its prodn. in plants
                                                                                                                                                                                                                                                                                                 1 MGMSWIFLELLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH
                                                                                                           Togheter with the light chain variable domain (AAR05089) the sequence
                                                                                                                                                                                                                                                                                    1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                          Polypeptide(s) which specifically bind human chorionic gonadotropin contg. antigen-binding domains comprising complementary determining
                                                                                                                                                                                                                                     Query Match 82.2%; Score 623; DB 2; Length 137; Best Local Similarity 84.2%; Pred. No. 1.5e-44; Matches 117; Conservative 9; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Guy's 13 anti-Streptococcus mutans antibody gamma chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLANET BIOTECHNOLOGY INC.
UNITED MEDICAL & DENTAL SCHOOLS GUYS.
                                                                                        -pp; English
                                                                                                                                                                                                                                                                                                                                                                                        GIFYTMDYWGQGTSVTVSS 137
                                                                                                                                                                                                                                                                                                                                                                              GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAW03183 standard; protein; 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95WO-US016889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94US-00367395
95US-00434000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ma JK, Lehner T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                      Disclosure; Page ?;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NPI; 1996-333987/33
                   N-PSDB; AAQ04694
                                                                                                                                                                                                                Sequence 137 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAT31293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-DEC-1994;
04-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9621012-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-DEC-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-JUL-11996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hiatt AC,
                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                   119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW03183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (PLAN-) (UNME-) 1
                                                               regions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW03183
g
                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                             δ
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 GKSLEWIGYIYPYNGNTYYNQKFKNKATLTVDNSSTSAYMSLRSLTSBDSAVYYCAT--- 117
    mucosal antigens, esp. against S
                                                                                                                                                                                                        The present sequence is the Guy's 13 anti-Streptococcus mutans antibody, gamma chain. The immunoglobulin (Ig) of the invention comprises a protection protein (PP), pref. a portion of the rabbit poly-Ig receptor, in association with an Ig derived light or heavy chain, having at least portion of an antigen (Ag) binding domain, specifically the Guy's 13 kappa or gamma chain. The Ig can be used to prevent dental caries by hinding S. mutans serotypes c, e and f, while the Pp protects the Ig in harsh mucosal, e.g. gastrointestinal, environments, therefore enhancing its effectiveness in passively immunising animals against mucosal pathogens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MEWTWVFLFLLSGTAGVHSGVQLQQSGPDLVKPGASVKISCKASGYTFTDYNIHWVKQSR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expression vector; heavy; light; chain; hypervariable region; CDR; constant region; hybridoma; Ig; immunoglobulin; KM-796; KM-750; KM-603;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chimeric antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 613.5; DB 2;
Pred. No. 8.8e-44;
6; Mismatches 10;
passive immunisation against mucosal S. sorbinus to prevent dental caries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Monoclonal antibody; Ab; ganglioside GM2;
```

```
WPI; 1999-468416/39.
N-PSDB; AAX99474.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 139 AA;
                                                                                                                                                                                                              07-JUN-1995;
                                                                                                                                                                                                                                                        07-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-NOV-1999
                                                                                                                            US5939532-A
                                                                                                                                                                      17-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY28384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Мив вр
                                          Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                               Chimeric human Ab expression vectors are constructed by inserting the Ab heavy and light chain variable region-encoding cDNA isolated from hybridomas producing a mouse or rat monoclonal Ab reacting with the ganglioside GM2 respectively into an expression vector for use in animal cells which contains the human Ab heavy and light chain constant region-canding cDNA. The expression vectors are introduced into animal cells and the transformant thus obtained is cultured for the produ. of a chimeric human Ab reacting with the ganglioside GM2. In contrast to mouse monoclonal Abs, the chimeric human Abs will not cause anti-mouse Ig Ab prodn. in the patient's body but show a prolonged blood half-life, with a reduced frequency of adverse effects, so that it can be expected to be requerior to mouse monoclonal Abs in the efficacy in the treatment of human cancer, for instance. Mouse anti-GM2 monoclonal Ab KM-796 and KM-750 and rat KM-603 heavy and light chain sequences are given in AAQ45426-30. CDR regions for use in chimeric Abs are indicated in the Features
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Humanised antibody specific for ganglioside GM2 - used for producing a cytocidal effect on cancers such as melanoma, neuroblastoma and glioma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                       Hasegawa M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antibody; nucleotide; genomic; hypervariable region; chimeric; light chain; heavy chain; amino acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20. .139
/label= Mature antibody chain
50. .55
/label= CDR1
/note= "Complementarity determining region"
69. .86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79.7%; Score 604; DB 2; Length 139; 82.7%; Pred. No. 5.8e-43; ive 6; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Antibody chain used to produce Human chimeric antibodies.
                                       Kuwana Y,
                                       Hanai N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . .19
|Tabel= Signal peptide
                                                                                                                                                                                                                  Claim 5; Page 104-105; 191pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY28356 standard; protein; 139 AA
                                          Shitara K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (KYOW ) KYOWA HAKKO KOGYO KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 115; Conservative
                                          Koike M,
                                                                                    WPI; 1994-126857/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                          N-PSDB; AAQ45426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 139 AA;
                                          Nakamura K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-AUG-2003
04-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY28356;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY28356
IID AAY2
XX AAY2
XX AAY2
XXX 27-A
DT 27-A
DT 27-A
DT 27-A
DT 19-A
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX ANTI
XX 
    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLISEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This antibody chain is used in the production of Human chimeric antibodies. The chimeric human antibodies are useful in the treatment of cancer, especially that which is of neural ectodermal origin. In contrast to prior art constructs based on mouse monoclonal antibodies, the chimeric human antibodies do not cause anti-mouse immunoglobulin production. The chimeric human antibodies have a prolonged half-life and a reduced frequency of adverse effects when compared to mouse monoclonal antibodies. (Updated on 27-AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kuwana Y, Hasegawa M, Koike M, Shitara K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antibody; nucleotide; genomic; hypervariable region; chimeric;
light chain; heavy chain; plasmid; hypervariable.
/label= CDR2
/note= "Complementarity determining region"
118. .129
                                                                                  /label= CDR3
/note= "Complementarity determining region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79.7%; Score 604; DB 2; Length 139; 82.7%; Pred. No. 5.8e-43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Anti-GM2 heavy chain from KM796 mouse hybridoma cell line.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18; Indels

    .19
        (1abel= Signal peptide 20. .139
        /label= Mature mouse heavy chain

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric human antibody expression vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Col 81-83; 188pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY28384 standard; protein; 139 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YYGYMFAYWGQGTLVTVSA 139
                                                                                                                                                                                                                                                                                                     95US-00483528.
                                                                                                                                                                                                                                                                                                                                                            93US-00116778.
                                                                                                                                                                                                                                                                                                                                                                                                                      (KYOW ) KYOWA HAKKO KOGYO KK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 82.77
Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nakamura K, Hanai N,
```

```
This amino acid sequence was isolated from mouse hybridoma cell line KM-796, and encodes for the anti-GM2 heavy chain. Chimeric human antibodies of the invention are useful in the treatment of cancer, especially that which is of neural ectodermal origin. In contrast to prior art constructs based on mouse monoclonal antibodies, the chimeric human antibodies do antibodies anti-mouse immunoglobulin production. The chimeric human antibodies antibodies have a prolonged half-life and a reduced frequency of adverse effects when compared to mouse monoclonal antibodies
                                                                                                                                                                                                                                          Shitara K;
                                                                                                                                                                                                                                          Koike M,
                           69. .85
/label= Hypervariable region 2
                                                         118. .128
/label= Hypervariable region 3
                                                                                                                                                                                                                                          Наведама М,
                                                                                                                                                                                                                                                                                               Chimeric human antibody expression vectors.
                                                                                                                                                                                                                                                                                                                           Example 1; Col 151-153; 188pp; English.

    .54
    label= Hypervariable

                                                                                                                                                                                                                                          Kuwana Y,
                                                                                                                                                      95US-00483528
                                                                                                                                                                                  93US-00116778
                                                                                                                                                                                                            HAKKO KOGYO
                                                                                                                                                                                                                                        Hanai N,
                                                                                                                                                                                                                                                                    WPI; 1999-468416/39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 139 AA;
                                                                                                                                                                                                            (KYOW ) KYOWA
                                                                                                                                                    07-JUN-1995;
                                                                                                                                                                                  07-SEP-1993;
                                                                                                                                                                                                                                        Nakamura K,
                                                                                               US5939532-A.
                                                                                                                          17-AUG-1999.
 Domain
                           Domain
                                                       Domain
```

or its antigen-binding

an antibody

New bifunctional molecules comprising

WPI; 2002-171707/22. N-PSDB; AAE18372

拮

Nemerow

(NOVS ) NOVARTIS AG. (NOVS ) NOVARTIS-ERFINDUNGEN VERW GES MBH. (SCRI ) SCRIPPS RES INST.

09-JUL-2001; 2001WO-EP007878. 10-JUL-2000; 2000US-00613017 portion, and a targeting agent, useful for e.g. gene therapy, or for promoting Adenoviral vector-mediated gene delivery to cells lacking av

present invention relates to a bifunctional molecule comprising an

Claim 10; Page 96; 106pp; English

integring

```
GKILEWIGYIYPYNGVSDYNQNPKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDP 120
                                                                                                                                             GKSLEWIGYIYPNNGGTGYNOKFKSKATLTVDKSSSTAYMELHSLTSEDSAVYYCATYGH 120
                                                                                      9
                                                                            1 MGWSWIFLFLLSGTAGVLSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMDWVKQSH
                                Gaps
                                ö
    Length 139;
                                18; Indels
  Score 604; DB 2;
Pred. No. 5.8e-43;
6; Mismatches 18
                                                                                                                                                                        121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                        121 YYGYMFAYWGQGTLVTVSA 139
    79.78;
Query Match
Best Local Similarity 82.7
Matches 115; Conservative
                                                                                                                  61
                                                                                                                                             61
                                                                                 셤
                                                                                                                                          요
                                                                                                                  ò
                                                                                                                                                                                                셤
                                                           ঠ
                                                                                                                                                                        ò
```

AAE18372 standard; protein; 438 AA

RESULT 15 AAE18372 (first entry)

07-MAY-2002

24444444444444444

AAE18372;

WO200204522-A2

17-JAN-2002

Homo sapiens

```
signalling pathway; targeted gene therapy; delivery vector; adenoviral gene delivery particle; viral infection; cancer; rheumatoid arthritis; cardiovascular disorder; diabetic retinc restenosis; ophthalmic disorder; hyperproliferative disorder; hormonal disorder; virucide; antilnflammatory; antirheumatic;
                                                                                                                                                                                                                                                                                                                Portion of mouse DAV-1 heavy chain monoclonal antibody
                                                                                                                                                                       Ź
  121 GSGYYFDYWGQGTTLTVSS 139
                                               ----IAŸWĠĠĠŢĿVŢVŚA 132
                                                                                                                                                                    ABG76347 standard, protein; 438
                                                                                                                                                                                                                                                                 10-MAY-2003 (first entry)
                                                                                                                                                                                                                 ABG76347;
                                                                                                                     RESULT 16
                                                                                                                                                                       222222222222
ઠ
                                                                                                                                                                                                                                                                                     Human; bifunctional molecule; monoclonal antibody; gene therapy; cancer; vascular disorder; diabetic retinopathy; restenosis; ophthalmic disorder; hyperproliferative disorder; hormonal disorder; DAV-1 heavy chain; cytostatic; vasotropic; ophthalmological.
                                                                                                                                                                                                                                        Human penton base monoclonal antibody, DAV-1 heavy chain fragment.
```

```
antibody or its antigen binding portion, and a targetting agent where the antibody specifically binds to an antigen in a protein that binds to averantibody specifically binds to an antigen in a protein that binds to averantically binds to a cell surface protein that activates the phosphatidylinositol 3 (PISK) signalling pathway. The bifunctional molecules are useful for gene therapy, for promoting Adenoviral (Ad) vector-mediated gene delivery to cells lacking av integrins, for enhancing Ad binding and internalisation, and in gene perint trargetting of viral and bacterrial vectors to cells that express targeted receptors. Diseases that can be targetted include cancers, vascular disorders, diabetic retinopathies, restenosis, ophthalmic disorders, hyperproliferative disorders, and hormonal disorders. The present sequence is human penton base monoclonal antibody, DAV-1 heavy chain fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GKSLEWIGYIYPYKGCTGYNQKFKSKATLTTDSSSNTAYMELRSLTSDASAVYYCARG-- 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDXNWHWVKQSH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse, bifunctional molecule, antigen-binding portion, alpha integrin, cell surface protein, phosphatidylinositol-3-OH kinase, PI3K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MGWSWIPLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 438;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79.2%; Score 600.5; DB 5; 82.0%; Pred. No. 3.9e-42; ive 6; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 82.0
es 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 438 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
```

셤

õ

ર્જ.

us-10-687-035-34.rag

```
WPI; 2002-171707/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                      Li B;
                                                                                                                                                                                                                                                                                            N-PSDB; AAD29308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 456 AA;
                                                                                                        WO200204522-A2
                                  Homo sapiens
                                                                                                                                                                                                                                                       Nemerow GR,
                                                                                                                                 17-JAN-2002
                                                                                                                                                                                                                                                                                                                                                          integrins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABG76345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                          Key
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABG76345
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
                                                                                                                                                                                                                                                                                                                                        The present invention relates to a bifunctional molecule comprising an antibody or its antigen-binding portion, and a targeting agent. The antibody specifically binds to an antigen in a protein that binds to alpha integrin, and the targeting agent specifically binds to a cell surface protein that activates the phosphatidylinositol-3-OH kinase (PI3K) signalling pathway. The bifunctional molecules are useful for targeted gene therapy using targeting delivery vectors, such as adenoviral gene delivery particles. The bifunctional molecules are useful for treating viral infections, rheumatoid arthritis, cancers, for treating viral infections, rheumatoid arthritis, cancers, cardiovascular disorders, diabetic retinopathies, restenosis, ophthalmic disorders, hyperproliferative disorders, and hormonal disorders. The present sequence represents a portion of the mouse DN-1 heavy chain that is used for a fusion protein bifunctional antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; bifunctional molecule; monoclonal antibody; gene therapy; cancer; vascular disorder; diabetic retinopathy; restenosis; ophthalmic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                       New bifunctional molecules comprising an antibody or its antigen-binding portion, and a targeting agent, useful for e.g. gene therapy, or for promoting Adenoviral vector-mediated gene delivery to cells lacking av
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MGMSWIFLFILSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 5; Length 438;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 600.5; DB 5; Length
Pred. No. 3.9e-42;
6; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human penton base monoclonal antibody, DAV-1 heavy chain.
antiarthritic; ophthalmological; DAV-1 heavy chain;
                                                                                                                                                                                                                                                                                                                     Claim 10; Page 35-36; 49pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE18370 standard; protein; 456 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----IAYWGOGTLVTVSA 132
            penton base monoclonal antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79.2%;
                                                                                                           10-JUL-2001; 2001US-00903327.
                                                                                                                                  10-JUL-2000; 2000US-00613017.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 82.0
Matches 114; Conservative
                                                                                                                                                                      (SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                      WPI; 2002-171707/22.
                                                                                                                                                                                                                                  N-PSDB; ABX12746.
                                                                                                                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 438 AA;
                                                            US2002164333-A1
                                                                                                                                                                                             Nemerow GR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-MAY-2002
                                                                                    07-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAE18370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                      gb.
                                      Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT AAE1837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               쉱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EEXEXEXE
 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
```

```
The present invention relates to a bifunctional molecule comprising an antibody or its antigen-binding portion, and a targetting agent where the antibody specifically binds to an antigen in a protein that binds to a vinceprin, and the targetting agent specifically binds to a cell surface protein that activates the phospharidylinositol 3 (PIXK) signalling pathway. The bifunctional molecules are useful for gene therapy, for promoting Ademoviral (Ad) vector-mediated gene delivery to cells lacking a vintegrins, for enhancing Ad binding and internalisation, and in gene delivery of by fibreless adenovirus particles. The bifunctional molecules cargetted receptors. Diseases that can be targetted include cancers, vascular disorders, diabetic retinopathies, restenosis, ophthalmic disorders, hyperproliferative disorders, and hormonal disorders. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New bifunctional molecules comprising an antibody or its antigen-binding portion, and a targeting agent, useful for e.g. gene therapy, or for promoting Adenoviral vector-mediated gene delivery to cells lacking av
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
hyperproliferative disorder; hormonal disorder; DAV-1 heavy chain; cytostatic; vasotropic; ophthalmological.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79.2%; Score 600.5; DB 5; Length 456; 82.0%; Pred. No. 4.1e-42; rive 6; Mismatches 12; Indels 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (NOVS ) NOVARTIS AG.
(NOVS ) NOVARTIS-ERFINDUNGEN VERW GES MBH.
(SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                     /note= "Hinge region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 10; Page 91-92; 106pp; English.
                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABG76345 standard; protein; 456 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ||||||| :||||:
----IAYWGQGTLVTVSA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GSGYYPDYWGQGTTLTVSS 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-JUL-2001; 2001WO-BP007878.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-JUL-2000; 2000US-00613017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 114; Conservative
```

ဝွ 9

```
New bifunctional molecules comprising an antibody or its antigen-binding portion, and a targeting agent, useful for e.g. gene therapy, or for promoting Adenoviral vector-mediated gene delivery to cells lacking av
                                                       Mouse; bifunctional molecule; antigen-binding portion; alpha integrincel surface protein; phosphatidylinositol-3-0H kinase; P13K; signalling pathway; targeted gene therapy; delivery vector; adenoviral gene delivery particle; viral infection; cancer; rheumatoid arthritis; cardiovascular disorder; diabetic retinopathy; restenosis; ophthalmic disorder; hyperproliferative disorder; antichemanal disorder; virucide; antiinflammatory; antirheumatic; antiarthritic; ophthalmological; DAV-1 heavy chain;
                                    Mouse DAV-1 heavy chain monoclonal antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 10; Page 30-31; 49pp; English.
                                                                                                                                                              penton base monoclonal antibody
                                                                                                                                                                                                                                                                                     2000US-00613017.
2000US-0325781P.
                                                                                                                                                                                                                                                            10-JUL-2001; 2001US-00903327
                                                                                                                                                                                                                                                                                                                           (SCRI ) SCRIPPS RES INST
           (first
                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-171707/22.
                                                                                                                                                                                                                                                                                                                                                   Nemerow GR, Li E;
                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; ABX12744.
                                                                                                                                                                                                              US2002164333-A1
                                                                                                                                                                                                                                                                                    10-JUL-2000;
10-JUL-2000;
            10-MAY-2003
                                                                                                                                                                                                                                     07-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                    integrins
                                                                                                                                                                                      gb.
                                                                                                                                                                                      Mus
```

The present invention relates to a bifunctional molecule comprising an antibody or its antigen-binding portion, and a targeting agent. The antibody or its antigen binds to an antigen in a protein that binds to an antigen in a protein that binds to surface protein that activates the phosphatidylinositol-3.0H kinase fursty signalling pathway. The bifunctional molecules are useful for targeted gene therapy using targeteing delivery vectors, such as adenoviral gene delivery particles. The bifunctional molecules are useful for treating viral infections, rheumatoid arthritis, cancers, cardiovascular disorders, diabetic retinopathies, restenosis, ophthalmic disorders, hyperproliferative disorders, and hormonal disorders. The present sequence represents mouse DAV-1 heavy chain, penton base 9 1 MGWSWIPLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH Gaps 7; 79.2%; Score 600.5; DB 5; Length 456; 82.0%; Pred. No. 4.1e-42; ive 6; Mismatches 12; Indels 7 Best Local Similarity 82.0 Matches 114; Conservative Sequence 456 AA; Query Match ሯ

MGWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNMHWVKQSH 셤 ò

119

셤

δ

RESULT 19 

AEB96754 standard; protein; 456

AEB96754;

(first entry) 20-OCT-2005

DAV-1 antibody heavy chain.

ocular disease; hyperproliferation; hormone metabolism disorder; cytostatic; vasotropic; antidiabetic; ophthalmological; metabolic-gen.; DAV-1; heavy chain; antibody.

Synthetic.

WO2005075506-A1

18-AUG-2005

29-DEC-2004; 2004WO-IB004324.

09-JAN-2004; 2004US-0535199P

(SCRI ) SCRIPPS RES INST.

፫ Vemerow GR,

WPI; 2005-555928/56.

New modified adenovirus fiber protein comprising a fiber shaft and a modified knob, useful for treating cancer, vascular disorders, diabetic retinopathies, restenosis and vascular, ophthalmic, hyperproliferative c hormonal disorders.

Example 1; SEQ ID NO 28; 250pp; English.

The invention relates to a modified adenovirue fiber protein comprising a fiber shaft that contains a sufficient number of shaft repeats to permit trimerization in the absence of a fiber knob or in the absence of an extrinsic trimerization domain, and optionally a modified knob, where, if the knob is included, it is modified to remove or disable the conditions of the knob. The invention also relates to a condition domain of the knob. The invention also relates to a condition of the knob removes or disables a trimerization domain of the knob, and the modified fiber trimerizes a nucleic acid molecule comprising a sequence of nucleotides that encodes the modified adenovirus fiber protein, a cell comprising the adenovirus particle comprising the modified fiber, a composition formulated for administration to a subject, comprising the adenovirus particle, detargeting an adenoviral vector particle comprising of the particle to a native adenoviral particle, where the binding of the particle to a native containing the unmodified fiber, introducing the adenovirus particle into containing the unmodified fiber, introducing the adenovirus fiber protein is cented to the subject and administering the introducing the cells into a subject and administering the interest variation to the subject. The modified adenovirus fiber protein is composition for the subject. The modified adenovirus fiber protein is composition for the subject. The modified adenovirus fiber protein is useful for treating cancer, vascular disease, diabetic retinopathy, restenosis, ocular diseases, hyperproliferative disorders and hormonal disorders. This sequence represents a DAV-1 antibody heavy chain used in the scope of the invention.

Sequence 456 AA;

Length 456; Score 600.5; DB 9; Pred. No. 4.1e-42; 6; Mismatches 12; 79.2%; Best Local Similarity 82.0 Matches 114; Conservative

61 GKILLEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120

ò

ઠે

Gaps

7;

Sequence 493 AA;

S

8 셤

```
The present invention relates to a bifunctional molecule comprising an antibody or its antigen-binding portion, and a targetting agent where the antibody specifically binds to an antigen in a protein that binds to aventice antibody specifically binds to an antigen in a protein that binds to a cell surface integrin, and the targetting agent specifically binds to a cell surface protein that activates the phosphatidylinositol 3 (PI3K) signalling promoting Adenoviral (Ad) vector-mediated gene delivery to cells lacking av integrins, for enhancing Ad binding and internalisation, and in gene calivery of by fibreless adenovirus particles. The bifunctional molecules permit targetting of viral and bacterial vectors to cells that express targetted receptors. Diseases that can be targetted include cancers, asscular disorders, diabetic retinopathies, restenois, ophthalmic disorders, hyperproliferative disorders, and hormonal disorders. The present sequence is human N-terminal DAV-1 heavy chain-mature epidermal growth factor (EGF) fusion protein which is used in the invention
                                                                                                                                                                                                                                                                                                                              Human; bifunctional molecule; monoclonal antibody; gene therapy; cancer; vascular disorder; disorder; cathopathy; restenosis; ophthalmic disorder; hyperproliferative disorder; hormonal disorder; DAV-1 heavy chain; cytostatic; vasotropic; ophthalmological; epidermal growth factor; EGF;
New bifunctional molecules comprising an antibody or its antigen-binding portion, and a targeting agent, useful for e.g. gene therapy, or for promoting Adenoviral vector-mediated gene delivery to cells lacking av

    .439
/note= "N-terminal portion of DAV-1 heavy chain"

                                                                                                                                                                                                                                                                                            Human N-terminal DAV-1 heavy chain-mature EGF fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (NOVS ) NOVARTIS AG.
(NOVS ) NOVARTIS-ERPINDUNGEN VERW GES MBH.
(SCRI ) SCRIPPS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 441. .493
/note= "Human mature EGF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 15; Page 101-102; 106pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                      AAE18379 standard; protein; 493 AA
                                                         121 GSGYYFDYWGOGTTLTVSS 139
                                                                              |||||| :|||:
----IAYWGQGTLVTVSA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-JUL-2001; 2001WO-EP007878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-JUL-2000; 2000US-00613017
                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-171707/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ï
                                                                                                                                                                                                                                                                                                                                                                                                         fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200204522-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nemerow GR,
                                                                                                                                                                                                                                                           07-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     integring
                                                                                                                                                                                                                         AAE18379;
                          61
                                                                                                119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Key
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                   RESULT 20
```

```
61 GKILEWIGYIYPYNGVSDYNQNFKSKATLIVDNSSNTAYMELRSLTSEDSAVYYCARWDF 120
                                                                                                           1 MGWSWIFLFFLLSGTAGVHSEVQLQQSGPELVKPGASVKISCKASGYTFTDYNIHWVKQSH
Length 493;
                        Indels
 DB 5;
Score 600.5; DB 5
Pred. No. 4.5e-42;
6; Mismatches 12
                                                                                                                                                                                                          completed: March 20, 2006, 07:35:44
he : 54.3087 secs
                                                                                                                                                121 GSGYYFDYWGQGTTLTVSS 139
                                                                                                                                                              |||||| :|||:
----IAYWGQGTLVTVSA 132
 79.2%;
            Local Similarity 82.0
les 114; Conservative
                                                                                                                                                                          119
   Query Match
                Best Loca
Matches
                                                                                                                                                                                                              Search cor
Job time
                                                                                                                        셤
                                                                        셤
                                                                                                 8
                                                                                                                                                 ò
                                                                                                                                                                      셤
```

GenCore version 5.1.7 Copyright (c) 1993 - 2006 Biocceleration Ltd.

OM protein - protein search, using sw model

March 20, 2006, 07:28:38; Search time 23.7968 Seconds (without alignments) 3765.293 Million cell updates/sec Run on:

US-10-687-035-33 656 1 MDPQVQIFSFLLISASVIMS......YCQQWSSNPFTFGSGTKLEI 127

Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

2166443 segs, 705528306 residues Searched:

2166443 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 100 summaries

UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SIMMARIES

		Description	Q5xfy8 mus musculu	Q58ev6 mus musculu	Q8vdd0 mus musculu	Q811c3 mus musculu	anu	P01680 mus musculu	Q8k1f3 mus musculu	en.	mus	ELLB	P04942 mus musculu	ana mus	Q8k1f0 mus musculu	Q9u410 mus musculu	P04941 mus musculu	Q9j176 mus musculu	mus	mua	mus	en w	anm .	P01677 mus musculu	mus a	homo	P18136 homo sapien	P18135 homo sapien	Q52164 mus musculu	Q9j178 mus musculu	ношо вар	xenor	P01620 homo sapien
SUMMARIES		QI	Q5XFY8 MOUSE	Q58EV6_MOUSE	Q8VDD0 MOUSE	Q811C3_MOUSE	Q569Y8_MOUSE	KV4A_MOUSE	Q8K1F3_MOUSE	KV6F_MOUSE	Q8K1F2_MOUSE	KV61_MOUSE	KV6H MOUSE	KV6J_MOUSE	Q8K1F0_MOUSE	Q9U410_MOUSE	KV6G_MOUSE	O9JL76_MOUSE	KV6K_MOUSE	Q8K1F1_MOUSE	KV6B_MOUSE	KV6A_MOUSE	KV6D_MOUSE	KV6C_MOUSE	KV6E_MOUSE	Q9UL78_HUMAN	KV3M_HUMAN	KV3L HUMAN	Q52L64 MOUSE	Q9JL78_MOUSE	Q723Y4 HUMAN	Q7SZ36_XENLA	KV3B_HUMAN
		8	~	~	~	~	~	-	~	-	~	-	Н	-	7	~	-	7	-	N	-	-	Н	-1	Н	7	Н	-	7	7	7	7	7
		Match Length DB	235	235	134	131	237	129	112	107	112	107	107	107	112	106	107	97	108	114	107	107	107	107	107	109	129	129	240	101	236	237	109
	overy	Match	87.5	81.2	80.2	78.0	72.1	68.9	66.2	65.4	65.2	64.6	64.5	64.5	64.3	64.2	64.0	63.9	62.3	62.2	60.2		59.6	59.5	57.2	53.4	53.2	53.0	52.7	52.1	52.1	51.6	51.5
		Score	574	533	526	511.5	473	452	434	429	428	424	423	423	422	421	420	419.5	409	408	395	392	391	390	375	350	349	348	345.5	341.5	341.5	338.5	338
	Result	No.	-	8	m	4	S	ø	7	89	0	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

фошо вар	ношо вар	пощо вар	homo sap	Denm enm	u		nomo sap		homo sap		F	homo sap		nomo sap		homo sap	homo sap		mus musc	xenopus	xenobna	mus musc		TERM MINE	mus musc	homo sap	homo sap	mus musc	homo sap	homo sap	homo sap	homo sap	nomo sap	mus musc	mus musc	homo sap	nomo sap	Denw enw	mus musc	homo sap	homo aan	homo sap		рошо вар	homo sap		homo sap	ношо вар	nomo sap		~		mus musc	mus	m.
																				O5hzc6	Oentu5	P01666	020eu4	0920e6					P01625	Q72473	Ofpit5	Q652C9	P01010	P01663	P01658	P01604																06pih6			
MAN	- i	N N		: 60	MAN	2	N N	MAN	22	2 2	: 00	z	z :	MAIN O	0 60	MAN	MAIN	MAN S	2 K	NTR	NLA	×1 5	300	USB	63	MAIN	2.0	200		MAIN	AN	NAN.	. <b>.</b>	: 60	EM	<b>5</b> .	z. 64	. 60	∞	MAN	ANE	AP.	USB	MAN	AAN O	0 tz	· •	<b>~</b>	AN.	a 6a	JSE	AAN S	¥	USE	
SPIH7_HU	73A HUMA	DH CAMP	73H HTIMA	73M MOUS	SPJF2 HU	71V HUMA	AND HIMA	ULB6_HU	73G HUMA	74C HUMA	73 I MOUS	73F_HUMA	73K HUMA	OLVY HU	30 MOUS	GMX9 HU	GMX8_HU	SSC8 HU	MOTIS	HZC6 XE	NTUS XE	AN MOUS	DECA MO	20E6 MO	73.J MOUS	6P5 <u>S</u> 8_HU	74B HUMA	AH MOUS	74A HUMA	72473 HU	PITS_HU	55ZC9 HU	ATA HUMAN	73K MOUS	73F MOUS	71L HUMA	ANDHA 1	SA_MOUS	73 P_MOUS	UL 77 HU	120E9 MO	UL85 HU	NIU6_MO	6SA9_HU	SEFEG HU	71 B HUMA	11H HUMA	11M HUMA	SOZW4 HU	73R MOUS	TS98 MO	OSPIHS HUMAN	73U MOUSE	092589 MOUSI	'sg_Moos
																																																				öö			
236	108	235	129	111	235	108	801	109	109	134	131	109	128	108	111	236	236	244	111	239	243	111	223	109	111	236	133	111	114	234	236	240	129	111	132	108	108	149	110	108	189	109	111	107	234	108	108	108	236	111	236	240	111	127	130
51.1	50.9	50.0 2.0	9 6	50.7	50.6	50.5	50.5 50.5	50.5	50.3	5.00	49.9	49.8	49.8	9.0	49.6	49.6	49.6	49.6	4 4 4 4 0 0	49.3	49.2	2.0	4. 4 V 0	48.9	48.9	48.9	48.8	48.7	48.6	48.6	48.6	48.6	4.84	48.2	48.2	48.1	48.1	48.1	48.0	47.9	4.74 9.74	47.7	47.6	47.6	47.5	47.5	47.2	47.2	47.2	47.0	46.9	46.9	46.8 46.7	46.7	46.7
335.5	334	334 223 5	333	332.5	332	331.5	331.5	331	330	328.5	327.5	327	326.5	325.5	325.5	325.5	325.5	325.5	325.5	323.5	322.5	321.5	321.5	320.5	320.5	320.5	320	319.5	318.5	318.5	318.5	318.5	317.5	316.5	316.5	315.5	315.5	315.5	315	314.5	314.5	313	312.5	312	311.5	309.5	309.5	309.5	309.5	308.5	307.5	307.5	307 306.5	306.5	306.5
32	33	ւ 4 դ	9 6	3.6	38	99	0 4	42	43	4 4 4 L	4	47	8 4	4. n	2 15	25	23	4. 1	υ υ υ	57	28	20 (	2 5	25	63	64														81	7 6	2 4	82	96	84	D 0	6 6	91	2 6	0 4	95	96	, g	0 0	100
						,																																																	

```
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
  g
                                                                                                                                                                                                                                                                                                                                                                    STRAIN=EVUBNIA SEQUENCE.

STRAIN=E70B(N; TISSUE-Colon;

MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

Straueberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Riausner R.D., Collins P.S., Wagner L., Shemen C.M., Schuler G.D.,

A lischul S.F., Zeeberg B., Buelow K.H., Schaefer C.F., Bhat N.K.,

A platchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

B capleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

B comstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunarathe P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulty S.W.,

Nilalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Rahey J., Helton B., Ketreman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

B. Manner D. M., Marand M., Warzen M.A.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

B. Manner D. M., Marand M., Warzen M.A.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

B. Manner D. M., Marand M., Schein J.E., Jones E.D., Dickson M.C.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

B. Manner D. M. Marand M.A., Touchman J.W., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PGSSPKPWIYATSKLASGVPARFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPLTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILSGFPGEKVTWTCRASSSVNYMHWYQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                      Eukaryota, Merazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia, Sciurognathi,
Muroidea, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (OCT-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   235 AA; 25835 MW; 828E9ED277FDC667 CRC64;
                                                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87.5%; Score 574; DB 2;
89.0%; Pred. No. 4.4e-47;
iive 3; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GO; GO: 0003823; F:antigen binding; IEA.
InterPro; IPR003159; Ig.
InterPro; IPR003109; Ig-11ke.
InterPro; IPR003109; Ig-21.
InterPro; IPR0030106; Ig-MGC.
InterPro; IPR003596; Ig-V.
Ffam, PF00564; C1-set, 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART; SM00409; IG; 2.
SMART; SM00407; IGC1; 1.
SMART; SM00407; IGC1; 1.
PROSITE; PS50335; IG LIKE; 2.
PROSITE; PS00290; IG_MHC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; BC084683; AAH84683.1; -; mRNA.
                                                    PRT;
                                                                                                       Created)
                                                                                               25-OCT-2004 (TrEMBLrel. 28, 25-OCT-2004 (TrEMBLrel. 28, 25-OCT-2004 (TrEMBLrel. 28, Hypothetical protein. Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=FVB/N; TISSUE=Colon;
Director MGC Project;
                                                  QSXFY8_MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 89.0
Matches 113; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O5XFY8; 23-235.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                             MOUSE
                                                                            QSXFY8,
RESULT 1

OSSEYS AC OCSERVA AC OCSERVA AC OCSERVA AC OCSERVA AC OCSERVA AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING AC OCC MANING 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
```

```
ALALMS-FWORTH 112.010.1073/pnas.242603899;

A MEDLINE=22388257; PubMed=1247932; DOI=10.1073/pnas.242603899;

A Klausner R.D., Colling F.S., Wagner L., Schaefer C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Blatchenko L., Marushia K., Farmer A.A., Rubin G.M., Hong L.,

A Brownstein M.J., Usdin T.B., Doshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Peters G.J., Abramson R.D., Mullahy S.J.,

B Brownstein M.J., Wockernan K.J., Malke J.A., Gunaratne P.H.,

R Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

R Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Nhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Butterfield X.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

B. Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDPQVQIPSFLLISASVIISRGQIVLTQSPAIMSASPGEKVTMTCSASSGVSYMHWYQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTWTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi; Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia, Sciurognathi, Muroidea; Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 81.9%; Pred. No. 3.9e-43;
Matches 104; Conservative 9; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.
EMBL; BC091738; AAH91738.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS50835; IG LIKE; 2.
PROSITE; PS00290; IG MHC; UNKNOWN 1.
SEQUENCE 235 AA; Z5719 MW; BE4E4ABDD2578252 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                       Last annotation update)
                                                                                                                                                                                                                                                                                                       Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; BCU91,30; SMR; QSBCV6; 23-235.

SMR; QSBCV6; 23-235.

GO; GO:003823; F:antigen binding; IEA.
InterPro; IPR003599; Ig.
InterPro; IPR003597; Ig.-1ike.
InterPro; IPR003597; Ig.-1.
InterPro; IPR003596; Ig.-1.

InterPro; IPR003596; Ig.-1.
                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                 10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30, 10-MAY-2005 (TrEMBLrel. 30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=FVB/N; TISSUE=Colon;
NIH MGC Project;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=FVB/N; TISSUE=Colon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mouse cDNA sequences."
                                                                                                                                                                                                  QSBEV6 MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF07654; C1-8et;
SMART; SM00409; IG; 2.
SMART; SM00407; IGc1; 1
SMART; SM00406; IGv; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse).
:||:||:
121 AGTRLEL 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                         Igk-C protein.
                                                                                                                                                                                                                                                                                                                                                                                                            Name=Igk-C;
                                                                                                                                                                                                                                     058EV6;
                                                                                                                                       RESULT
Q58EV6_
```

ઠે

```
59 QKPGSSPKPWIYGTSTLASGVPTRFSGSGGTSYSLTISRVEAEDAATYYCQQWSSNP-F 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 QKPGSSPKLMIYSTSNLASGVPVRFSGSGSGTSYSLTISSVEAEDAATYYCQQYDSSPSI 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MDSQVQIPSFLLISALVIMSRGQIVLTQSPAIMSASPGEKVTWTCRASSSVRSSYLHWYQ 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSV--IYMCWNQ 58
                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia, Sciurognathi,
Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        immunoglobulin gamma-3 kappa chain.
                                                                                                                                                                                                            STRAIN=MRL/MpJ-lpr/lpr; TISSUE=Spleen;
MEDLINE=93156722; PubMed=8429833; DOI=10.1016/0161-5890(93)9008
Takahashi S., Itoh J., Nose M., Ono M., Yamamoto T., Kyogoku M.
Takahashi S., Itoh J., Nose M., Ono M., Yamamoto T., Kyogoku M.
"Cloning and CDNA sequence analysis of nephritogenic monoclonal antibodies derived from an MRL/lpr lupus mouse.";
                       )1-JUN-2003 (TrEMBLrel. 24, Last sequence update)
)1-MAR-2004 (TrEMBLrel. 26, Last annotation update)
|munoglobulin gamma-3 kappa chain precursor (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14083 MW; 5E83656954666E9E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 511.5; DB 2
Pred. No. 2.4e-41;
7; Mismatches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       237 AA
                                                                                                                                                                                                                                                                                                                                                                                     musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                        MOl. Immunol. 30:177-182(1993).
EMBL; D14629; BAA03482.1; -; mRNA.
HSSP; P01679; 2FBJ.
                                                                                                                                                                                                                                                                                                                                                                 SMR; Q811C3; 23-131.
Ensembl; ENSMUSG0000058987; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                           SMARI; SM00406; IGv; 1.-
PROSITE; PS50835; IG_LIKE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                       PR007110; Ig-like.
PR003596; Ig.v.
406; IGv; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 81.5%;
Matches 106; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O-MAY-2005 (TrEMBLrel. 30, O-MAY-2005 (TrEMBLrel. 30, O-MAY-2005 (TrEMBLrel. 30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q569Y8_MOUSE PRELIMINARY;
Q569Y8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    118 TFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22
>131
                                                                               Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse)
                                                                                                                                                                                            NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                       WCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Igk-C protein.
Name=Igk-C;
                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON TER
SEQUENCE
   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SGTSPKRWIYDTSKLASGVPARFSGSGGTSYSLTISSMEAEDAATYYCQQWTSNPLTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQMSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDPQVQIPSFLLISASVILSRGQIVLTQSPAIMSASPGEKVTMTCSASSSISYMHWYQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MDFQVQIPSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Caton A.J., Brownlee G.G., Staudt L.M., Gerhard W.; "Structural and functional implications of a restricted antibody response to a defined antigenic region on the influenza virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chernajovsky Y.; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CFDF8E2236E2D0CF CRC64;
                                                                                                                                                                                                      01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Anti-MOG 212 variable light chain (Fragment).
Name=Gml502; Synonyme=anti-MOG kappa;
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 526; DB 2;
Pred. No. 1e-42;
7; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP; PO1834;
SMR; Q8VDDO; 233-134.
SMR; Q8VDDO; 233-134.
Ensembl; ENSWUSGO000062047; Mus musculus.
MGI; MGI:2686348; Gm1502.
InterPro; IPR007110; Ig-like.
InterPro; IPR0071556; Ig-v.
SMART; SM00406; IGv; 1.
R PROSTTE; PS50835; IG LIKE; 1.
134 134 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OJ. 5:1577-1587 (1986).
L; AJ416331; CAC94866.1; -; mRNA.; G27887; G27887.
                                                                                                                                                                    QBVDD0_MOUSE PRELIMINARY;
Q8VDD0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QB11C3 MOUSE PRELIMINARY;
Q811C3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 82.7
Matches 105; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sembi P.;
Submitted (JAN-2002)
                                   SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                     NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=BALB/c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-BALB/C
61
                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4
Q811C3 MOUSE
ID Q811C3 MC
AC Q811C3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
```

셤 ò

8 용 δ a

3,

14; Indels

```
QBK1F3_MOUSE PRELIMINARY;
Q8K1F3;
                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 74.4'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                      45
129
129 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FGSGTKLEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQ
PubMed=2499887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119
                                                                                                                                                                                                                                                                                                                                                      DISULPID
                                                                                                                                                                                                                                                                                                                                                                                SEQÜENCE
                                                                  removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOUSE
                                                                                                                                                                                                                                                                           REGION
REGION
REGION
REGION
REGION
                                                                                                                                                                                                                                                             REGION
                                                                                                                                                                                                                                                                                                                                           REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QKPGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFT 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 QKSGTSPKAMIYGTSNIASGVPFRFSGSGSGTSYSLTISSMBAEDAATYYCQQMNYYPLT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=82115300; PubMed=6799208; DOI=10.1016/0092-8674(81)90033-7; Kwan S.-P., Max E.E., Seidman J.G., Leder P., Scharff M.D.; Kwan S.-P., Max E.E., Seidman J.G., Leder P., Scharff M.D.; Two stappa immunoglobulin genes are expressed in the myeloma S107."; Cell 26:57-66(1981).

-!- MISCELLANEOUS: This protein, in which there is a deletion of two amino acids at the V-J recombination site (after position 118), is synthesized but not secreted in cells that express and secrete the normal kappa chain S107.
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Vilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Mullin M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.S., Yones S.J., Marza M.A., Schein J.E., Jones S.J.M., Marza M.A., Schein J.E., Jones S.J.M., Marza M.A., "Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
10-MAY-2005 (Rel. 01, Last annotation update)
10-MAY-2005 (Rel. 47, Last annotation update)
19 kappa chain V-1V region S107B precursor.
Mus musculus (Mouse).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Musinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTWTCRASSSV--IYMCWNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                2;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              20; Indels
                                                                                                                                                                                                              NIH MGC Project;
Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases
EMBL; BC092251; AAH92251.1; -; mRNA.
SNR; Q569Y8; 23-237.
                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS50835; IG LIKE; 2.
PROSITE; PS00290; IG_MHC; UNKNOWN 1.
SEQUENCE 237 AA; Z5978 MW; A88596AA47FFB932 CRC64;
                                                                                                                                                          Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                   / Match 72.1%; Score 473; DB 2; Local Similarity 71.3%; Pred. No. 2.3e-37; ne 92; Conservative 15; Mismatches 20;
                                                                                                                                                                                                                                                               InterPro; IPR003599; IG.
InterPro; IPR00310; Ig-like.
InterPro; IPR003109; Ig_C1.
InterPro; IPR003006; Ig_MHC.
InterPro; IPR003596; Ig_V.
Pfam; PF07654; C1-8et; 1.
SMART; SM00409; IG; 2.
SMART; SM00406; IGC1; 1.
                                                                                                                                                                                                STRAIN=FVB/N; TISSUE=Kidney;
                                                                                                                                               and mouse cDNA sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             || ||:||:
121 FGGTRLEL 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLEOTIDE SEQUENCE.
                                                                                                                                                                         [2]
NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KV4A MOUSE
P01680;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119
                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KV4A_MOUSE
     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
```

```
This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QKPGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFT 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSV--IYMCWNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sclurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Paul S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baccala R., Quang T.V., Gilbert M., Ternynck T., Avrameas S.; "Two murine natural polyreactive autoantibodies are encoded by nonmutated germ-line genes."; Proc. Natl. Acad. Sci. U.S.A. 86:4624-4628 (1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ig kappa chain V-IV region S107B. Framework-1. Complementarity-determining-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE.
STRANTB-RALBO, TISSUE=Hyperimmunized spleen;
STRON Y.-X., Taguchi H., Planque S., Karle S., Nishiyama Y.,
Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Complementarity-determining-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Complementarity-determining-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PSS0835; IG LIKE; 1.
Immunoglobulin domain; Immunoglobulin V region; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E4BB73072DCF6BE4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Anti-VIPase light chain variable region (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68.9%; Score 452; DB 1; 74.4%; Pred. No. 1.3e-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         112 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                By similarity.
                                                                                                                                                                                                                                          PIR; A01943; KVMS7B.
HSSP; POL680; 23-129.
Ensembl; ENSMUSGO0000059773; Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Framework-3.
                                                                                                                                                                                   EMBL; J00577; AAA38780.1; -; Genomic_DNA
EMBL; V00780; CAA24157.1; -; Genomic_DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Framework-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Framework-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13834 MW;
                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR007110; Ig-like.
InterPro; IPR001356; Ig_v.
SMART; SMO406; IGv; 1.
PROSITE; PS50815; IG_LIKE; 1.
```

```
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=2499887
                                                                                             REGION
DISULFID
NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON TER
NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                 REGION
                                                                       REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
           8111111
                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RATARA RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This Swiss-Prot entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24 IVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the Buropean Bioinformatics Institute. There are no restrictions o
use as long as its content is in no way modified and this statement
                                                                                           clonally
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=83271467; PubMed=6877353;
Kaartinen M., Griffiths G.M., Markham A.F., Milstein C.;
"mRNs sequences define an unusually restricted IgG response to 2-
phenyloxazolone and ite early diversification.";
Nature 304:320-324(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                     MEDLINE=92381444; PubMed=1512540; DOI=10.1084/jem.176.3.761; Tillman D.M.; Jou N.T.; Hill R.J.; Marion T.N.; Both IgM and igG anti-DNA antibodies are the products of cleaner of the sell stimulation in (NZB x NZW)FI mice."; J. Exp. Med. 176:761-779 (1992). EMBL; AFS16282; AAM64200.1; -; Genomic_DNA. PIR; PH1085; FH1085.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2; Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Complementarity-determining-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84 SGSGSGTSYSLTISRVEAEDAATYYCOOWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS50835; IG LIKE; 1.
Hybridoma: Immunoglobulin domain; Immunoglobulin V region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   between the Swiss Institute of Bioinformatics and the the European Bioinformatics Institute. There are no re
                                                                                                                                                                                                                                                                                                                                                                                                           112 AA; 12017 MW; 22DD75B5414CDB18 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                     66.2%; Scor.
80.8%; Pred. No. be.
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 434; DB 2
Pred. No. 6e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
18 Kappa chain V-VI region NQ2-17.4.1.
Mus musculus (Mouse)
                                                                                                                                                                                                                                                          Ensembl; ENSMUSG0000063156; Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMR; P04940; 1-107.
Ensembl; ENSMUSG0000062047; Mus musculus.
InterPro; IPR007110; Ig-like.
InterPro; IPR03596; Ig_v.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; K00735; AAA38680.1; -; mRNA
HSSP; P01679; 2FBJ.
                                                                                                                                                                                                                                                                            InterPro; IPR007110; Ig-like.
InterPro; IPR003596; Ig_v.
SMART; SM00406; IGv; 1.
                                                                                                                                                                                                                                                                                                                                               PROSITE; PS50835; IG LIKE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                HSSP; P01837; 25C8.
SMR; Q8K1F3; 2-112.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RÉGION
REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
```

```
23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR 82
                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Buarchontoglires, Glires, Rodentia, Sciurognathi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24 IVLSQSPAILFASFGETVTMTCRASSSVIYMCWNQOKFGSSFKPWIYGTSTLASGVPTRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 IVLTQSPAIMSASPGEKVTITCNASSSVSYMHWPQQKPGTSPKLWIYSTSNLASGVPARP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-BALB/c; TISSUB-Hyperimmunized spleen,
Zhou Y.-X., Taguchi H., Planque S., Karle S., Nishiyama Y., Paul S.;
Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Baccala R., Quang T.V., Gilbert M., Ternynck T., Avrameas S., "Two murine natural polyreactive autoantibodies are encoded by
                                                                                                                                                                                                                           Score 429; DB 1; Length 107; Pred. No. 1.7e-33; 9; Mismatches 14; Indels
                                                               framework-3.
Complementarity-determining-3.
Framework-4.
By similarity.
                             Complementarity-determining-2.
                                                                                                                                                                                                                                                                                                                                                                                                                              83 FSGSGSGTSYSLTISRVEAEDAATYYCOOMSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 FSGSGSATSYSLTITSMQAEDAATYYCQQWSSNPLTFGAGTKLEL 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84 SGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13; Indele
                                                                                                                                                                           6F694284ECFA68E6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112 AA; 11953 MW; 4716B87FADBS43ED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
1-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Anti-Vibase light chain variable region (Fragment).
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Proc. Natl. Acad. Sci. U.S.A. 86:4624-4628(1989)
EMBL; AF516283; AAM64201.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ch 65.2%; Score 428; DB 2; Similarity 80.8%; Pred. No. 2.3e-33; 84; Conservative 7; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ensembl; ENSMUSG0000064150; Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last seq
                                                                                                                                                                         11561 MW;
                                                                                                                                                                                                                             65.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS50835; IG_LIKE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nonmutated germ-line genes."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR007110; Ig-like InterPro; IPR003596; Ig_v.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QEKIF2 MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                               Conservative
48
55
87
96
106
87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMART; SM00406; IGV;
                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR, H33932, H33932.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUCLEOTIDE SEQUENCE.
```

P04943;

```
This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                         This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroldea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QIVLSQSPALLFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=83271467; PubWed=6877353; Kaartinen M., Griffiths G.M., Markham A.F., Milstein C.; Kaartinen M., Griffiths G.M., Markham A.F., Milstein C.; "mRNA sequences define an unusually restricted IgG response to phenyloxazolone and its early diversification."; Nature 304;320-324 [1983].
                                MEDLINE=83271467; PubMed=6877353; Markham A.F., Milstein C.; Kaarlinen M., Griffiths G.M., Markham A.F., Milstein C.; "mRNA sequences define an unusually restricted IgG response to sphenyloxazolone and its early diversifidation."; Nature 304;320-324(1983).
-1- FUNCTION: Anti-2-phenyl oxazolone (PHOX) Antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 107;
                                                                                                                                                                                                                                                                                                                                                                                                    Complementarity-determining-1.
Pramework-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Complementarity-determining-2.
                                                                                                                                                                                                                                                                                                                                         SMART; SM00406; IGV: 1.
PROSITE; PS50835; IG LIKE; 1.
Hybridoma; Immunoglobulin domain; Immunoglobulin V region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Framework-3.
Complementarity-determining-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11605 MW; CA6C4284ECFCB550 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64.5%; Score 423; DB 1;
77.1%; Pred. No. 6.5e-33;
tive 9; Mismatches 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-MAY-2005 (Rel. 47, Last annotation update)
Ig kappa chain V-VI region NQ5-78.2.6.
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      107 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      By similarity.
                                                                                                                                                                                                                                                                                           Ensembl; ENSWUSGO000062047; Mus musculus.
InterPro; IPR007110; Ig-like.
InterPro; IPR003596; Ig_v.
                                                                                                                                                                                                                                                                                                                                                                                            Framework-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Framework-4
                                                                                                                                                                                                                                              EMBL; K00739; AAA38684.1; -; mRNA.
HSSP; P01679; 2PBJ.
SWR; P04942; 1-107.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-AUG-1987 (Rel. 05, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                         48
55
87
96
106
87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        107 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
CBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-AUG-1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P04944;
                                                                                                                                                                                                                       removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGION
                                                                                                                                                                                                                                                                                                                                                                                               REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KV6J 1
                                                                                                                                                                                                                                                                                                                                                                                                                 REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Bukarnalia, Eutheria, Buarchontoglires, Glires, Rodentia, Sciurognathi, Muroidea, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                         Bukarrota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Gaps
                                                                                                                                                                                                                                      Length 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Complementarity-determining-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Complementarity-determining-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83 FSGSGSGTSYSLTISRVEAEDAATYYCOOMSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Complementarity-determining-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS50835; IG LIKE; 1.
Hybridoma; Immunoglobulin domain; Immunoglobulin V region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11573 MW; 6F694824ECF0C8E6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 424; DB 1;
Pred. No. 5.2e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
10-Appa chain V-VI region NOS-61.1.2.
Mis musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                      13-AUG-1987 (Rel. 05, Last sequence update) 10-MAY-2005 (Rel. 47, Last annotation update) Ig kappa chain V-VI region NQ6-8.3.1. Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           By similarity.
                                               107 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ensembl; ENSMISGO000062047; Mus musculus.
Interpro; IPR007110; Ig-like.
Interpro; IPR003596; Ig_v.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Framework-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Framework-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Framework-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; K00740; AAA38685.1; -; mRNA.
HSSP; P01679; 2FBJ.
                                               PRT;
                                                                              Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 77.1
nes 81; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              106
87
                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART; SM00406; IGV; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88
97
23
107
107 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMR; P04943; 1-107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KV6H MOUSE
P04942;
                                                                                 13-AUG-1987
                                                  KV6I MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON TER
SEQUENCE
```

Query Match

Matches

ò 셤 MOUSE

SSSSBARARD

RESULT 11

유 8

DISULPID

REGION REGION

REGION REGION REGION REGION

removed

82 9

Gaps

ö

Length 112;

64.38;

```
112 AA; 11901 MW; F6644663201AA239 CRC64;
                                                  Best Local Similarity 80.6%;
Matches 83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-AUG-1987 (Rel
10-MAY-2005 (Rel
                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=12567627
                                                                                                                                                                                                                                                                                                                                                                                                                                        Huang H.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMR; Q9U410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KV6G MOUSE
  NON TER
SEQUENCE
                                                                                                                                         82
                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                       Query Match
                                                                                                                                                                                                    RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
 F 8
                                                                                                           셤
                                                                                         ò
                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STTREERSERFFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
Buropean Bioinformatics Institute. There are no restrictions on its as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                            23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR 82
                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentía; Sciurognathi;
Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhou Y.-X., Taguchi H., Planque S., Karle S., Nishiyama Y., Paul S., Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                     .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Baccala R., Quang T.V., Gilbert M., Ternynck T., Avrameas S.; "Two murine natural polyreactive autoantibodies are encoded by
                                                                                                                                                                                                                                                                                                        Score 423; DB 1; Length 107;
Pred. No. 6.5e-33;
8; Mismatches 15; Indels
                                                                                                                                                                              Complementarity-determining-1.
                                                                                                                                                                                                      Complementarity-determining-2,
                                                                                                                                                                                                                              Complementarity-determining-3
                                                                                                                                       PROSITE; PS50835; IG_LIKE; 1.
Hybridoma; Immunoglobulin domain; Immunoglobulin V region.
                                                                                                                                                                                                                                                                                                                                                                                                               83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLE 126
                                                                                                                                                                                                                                                                                                                                                                                                                            61 FXGSGSATSYSLTITSMQAEDAATYYCQQWSSNPLTFGSGTKLE 104
                                                                                                                                                                                                                                                                                A38290781F3C30D3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Anti-VIPase light chain variable region (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 86:4624-4628(1989).
BMDL, AFS1285; AAM64203.1; -; Genomic_DNA.
PIR; A33933; PC4405.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=BALB/c; TISSUE=Hyperimmunized spleen;
                                                                                                                                                                                                                                                        By similarity.
                                                                                  Ensembl; ENSMISSG0000062047; Mus musculus.
Interpro; IPR007110; Ig-like.
Interpro; IPR003596; Ig_v.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Insembl; ENSMUSG0000062047; Mus musculus
                                                  EMBL; K00744; AAA38689.1; -; mRNA
                                                                                                                                                                                                                                                                                  11613 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR007110; Ig-like.
InterPro; IPR00359; Ig-v.
SWART; SW00406; IGv; 1.
PROSITE; PS50835; IG_LIKE; 1.
                                                                                                                                                                                                                                                                                                          64.5%;
                                                                                                                                                                                                                                                                                                                      77.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QBK1F0 MOUSE PRELIMINARY;
Q8K1F0;
                                                                                                                                                                                                                                                                                                                      Best Local Similarity 77.9
Matches 81; Conservative
                                                                                                                         SMART; SM00406; IGV; 1
PROSITE; PS50835; IG L
                                                                                                                                                                                                                                                                107 1
107 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE
                                                                           SMR; P04944; 1-106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=2499887
                                                             Q91W12;
                                                                                                                                                                                                                                                       DISULPID
NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                        Query Match
                          removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOUSE
                                                                                                                                                                           REGION
REGION
REGION
                                                                                                                                                                                                                REGION
                                                                                                                                                                  REGION
                                                                                                                                                                                                                               REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                 8
```

```
25 VLSQSPAILFASPGETVTMTCRASSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTRFS 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 LLTQSPAIMSASPGEKVTMTCSASSSVSYVYWYLQKPGSSPRLLIYDTSNLASGVPVRPS 62
                                                                                                                                                                           3 VLTQSPAIMSASPGEKVTMTCSASSSVSYMHWYQQKSGTSPKRWIYDTSKLASGVPARFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia, Sciurognathi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25 VLSQSPAILPASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTRFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Song X.T., Feng Z.Q., Qiu Z.N., Li Y.Q., Yu X.C., Xiong Y., Yin C.C.,
                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "[Cloning and sequence analysis of the light chain variable region gene of monoclonal anti-idiotypic antibody NP30 of Schistosoma
                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             i, Last annotation update)
Schistosoma japonicum antibody NP30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ji Sheng Chong Xue Yu Ji Sheng Chong Bing Za Zhi
                                                               IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13; Indels
                                                                                                                                                                                                                                       GSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSGSGTSYSLTISRMEAEDAATYYCQQWTSYPFTFGSGTKGEL 105
                                                                                                                                                                                                                                                                                             GSGSGNSYSLTISSTEGEDAATYYCOOWSSNPPTFGGGTKLEI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85 GSGSGTSYSLTISRVEAEDAATYYCOOWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    106 AA; 11478 MW; F20F544426BAE63E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Monoclonal anti-idiotypic Schistosoma japonicum antib
immunoglobulin light chain variable region (Fragment)
Score 422; DB 2;
Pred. No. 8.5e-33;
3; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 421; DB 2,
Pred. No. 1e-32;
8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5, Last sequence update)
7, Last annotation update)
region NQ2-48.2.2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     107 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF207620; AAF19434.1; -; Genomic_DNA.
HSSP; P01679; 2FBJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-AUG-1987 (Rel. 05, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR007110; Ig-11ke.
InterPro; IPR003596; Ig-v.
SRMRT; SM00406; IGV.
PROSITE; PSS0835; IG LIKE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 79.6%;
Matches 82; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9U410 MOUSE PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ig kappa chain V-VI Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hongguo Ji Sheng
8:257-259(2000).
```

us-10-687-035-33.rup

```
97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KV6K MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGION
REGION
DISULFID
NON_TER
                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               removed.
                                                                                                                                                                                                                        NON TER
NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGION
REGION
REGION
REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KV6K_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                            This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Eutheria; Buarchontoglires, Clires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOI=10.1128/IAI.68.10.5803-5808.2000;
Malkiel S., Liao L., Cunningham M.W., Diamond B.;
"T-Cell-dependent antibody response to the dominant epitope of
                                                                                                                    MEDLINE=83271467; PubMed=6877353; Raartinen M., Griffiths G.M., Markham A.F., Milstein C.; mann B. equences define an unusually restricted IgG response to phenyloxazolone and its early diversification."; Nature 304:320-324(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64.0%; Score 420; DB 1; Length 107;
llarity 76.2%; Pred. No. 1.3e-32;
Conservative 10; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pramework-1.
Complementarity-determining-1.
Framework-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Complementarity-determining-3. Framework-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Complementarity-determining-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWR; P04941; 1-103.
SWR; P04941; 1-103.
InterPro; IPRO0110; 19-like.
InterPro; IPRO0110; 19-like.
InterPro; IPRO01596; 19_v.
SWART; SWO0406; IGV.
FROSTIE; P550815; 1G LIKE; 1.
Hybridoma; Immunoglobulin V region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Anti-myosin immunoglobulin light chain variable region
                                                                                                                                                                                                                        -! - FUNCTION: Anti-2-phenyl oxazolone (PHOX) Antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11557 MW; 72488DA9EF354934 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                By similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Framework-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=DBA/2;
MEDLINE=20448942; PubMed=10992488;
                                                                                                                                                                                                                                                                                                                                                                                   EMBL; K00737; AAA38682.1; -; mRNA.
HSSP; Q91W12; 1AY1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9JL76_MOUSE PRELIMINARY, Q9JL76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      107 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
hes 80; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10090;
                                                            NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOUSE
                                                                                                                                                                                                                                                                                                                                                    removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGION
REGION
REGION
REGION
REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REAR REPORTED TO THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY 
      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
```

```
This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus misculus (Mouse).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Buarchontoglires; Glires, Rodentia, Sciurognathi,
Muroidea, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 LSASPGEKVTMTCRASSSVSYMHWYQQKPGSSPKPWIYATSNLASGVPARFSGSGSGTSY
streptococcal polysaccharide, N-acetyl-glucosamine, is cross-reactive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33 LFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTRFSGSGSGTSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2; Length 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUCLECTIDE SEQUENCE.
MEDLINE=83271467; PubWed=6877353;
Kaartinen M., Griffiths G.M., Markham A.F., Milstein C.;
"mRN sequences define an unusually restricted IgG response 'phenyloxazolone and its early diversification.";
Nature 304:320-324(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Complementarity-determining-2. Framework-3. Complementarity-determining-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Complementarity-determining-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hybridoma; Immunoglobulin domain; Immunoglobulin V region.
                                                                                                                                                                                                                                                                                                                                                                      C9EE1FFE1F49DA1C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93 SLTISRVEAEDAATYYCOOWSSN-PFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 1.3e-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
113-AMY-2005 (Rel. 47, Last annotation update)
19 kappa chain V-VI region NQ2-6.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    108 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Framework-4.
By similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP; Q91W12; 1AY1.
SMR; P04945; 1-108.
Ensembl; ENSWUSG0000062686; Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                             Score 419.5;
                                                                                                                                                                          musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Framework-2.
                            With Cardiac myosin.";
Infect. Immun. 68:5803:5808(2000).
EMBL; AP206030; AAF69328.1; -; mRNA.
HSSP; P01679; 2FBJ.
SMR; Q9JL76; 1-97.
Ensembl; ENSWINSG00000057015; Mus muscu InterPro; IPR007110; Ig-like.
InterPro; IPR003596; Ig-v.
SMART; SM00406; IGv; 1.
PROSITE; PS50835; IG_LIKE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; K00746; AAA38691.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR007110; Ig-like.
InterPro; IPR003596; Ig_v.
SMART; SM00406; IGv; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS50835; IG LIKE; 1.
                                                                                                                                                                                                                                                                                                                                                                      97 AA; 10542 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                             63.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            86.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 86.5 Matches 83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
```

```
NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KV6A MOUSE
P01675;
                                                                 MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOUSE
                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ठे
                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 IVLTQSPAIMSASPGEKVTMTCRASSSVSSSYLHWYQQKSGASPKLWIYSTSNLASGVPA 61
                                                                                                                                                    23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IVLSQSPAILFASPGETVTMTCRASSSV--IYMCWNQQKPGSSPKPWIYGTSTLASGVPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukarryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;
Muridae; Murinae; Mus.
                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              s:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-92381444; PubMed=1512540; DOI=10.1084/jem.176.3.761; Italhan D.M., Jou N.T., Hill R.J., Marion T.N.; Bebth 18 beth 18 and 196 and 196 and 196 and 196 are the products of clonally selective B cell stimulation in (NZB x NZW)F1 mice.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Paul
                                                                                     ;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Baccala R., Quang T.V., Gilbert M., Ternynck T., Avrameas S.;
"Two murine natural polyreactive autoantibodies are encoded by
nonmutated germ-line genes."
Proc. Natl. Acad. Sci. U.S.A. 86:4624-4628 (1989).
                                                                                                                                                                                                                    83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNP--FTFGSGTKLEI 127
                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE.
STRATNE-BALBJC; TISSUE-Hyperimmunized spleen;
STRAT Y.-X., Teguchi H., Planque S., Karle S., Nishiyama Y.,
Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
                                        Length 108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 408; DB 2; Length 114;
Pred. No. 1.9e-31;
6; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RFSGSGSGTSYSLTISSMEAEDAATYYCQQYHSYPRIFGGGTKLEI 107
                                                                                   14; Indels
108 AA; 11713 MW; DABF235CD9680AC6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8BD9833DBF3EEFD1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                             01-0CT-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Anti-VIPase light chain variable region (Fragment).
Rukawara
                                        Score 409; DB 1;
Pred. No. 1.5e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 1.9e-
6; Mismatches
                                                                                   10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF516284; AAM64202.1; -; Genomic_DNA.
PIR; A33933; A33933.
PIR; PH1058; PH1058.
                                                                                                                                                                                                                                                                                                                                                                        114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ensembl; ENSMUSG0000059896; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12163 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J. Exp. Med. 176:761-779(1992)
EMBL; AF516284; AAM64202.1; -;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR007110; Ig-like.
InterPro; IPR003596; Ig_v.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ROSITE; PS50835; IG_LIKE; 1.
                                        62.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ch 62.2%;
1 Similarity 78.3%;
83; Conservative
                                                               Similarity 75.7
81; Conservative
                                                                                                                                                                                                                                                                                                                                                                    QBK1F1 MOUSE PRELIMINARY;
Q8K1F1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           114 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART; SM00406; IGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HSSP; P01837; 25C8
SMR; O8K1F1; 2-114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=2499887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                        Query Match
Best Local (
                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
စ္တ
                                                                                                                                                                    윱
                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                      DOT THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                              8
                                                                                                                                                                                                                                                     윤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
```

```
This Swiss-Prot entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MISCELLANEOUS: This chain was isolated from a myeloma protein that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   restrictions on
                                                                                                                                               Lunaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sclurognathi;
Muroidea; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    between the Swiss Institute of Bioinformatics and the EMBL outeta
the Buropean Bioinformatics Institute. There are no restrictions o
use as long as its content is in no way modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                 PROTEIN SEQUENCE.
MEDLINE="9082830; PubMed=103573;
Rao D.N., Rudikoff S., Potter M.;
"k Chain variable regions from three galactan binding myeloma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Complementarity-determining-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Complementarity-determining-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Complementarity-determining-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83 PSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FSGSGSGTSYSLTISSMEAEDAALYYCOOMNYPLITFGSGTKGEI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36E6D022A5EC34D7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match 60.2%; Score 395; DB 1; Local Similarity 75.2%; Pred. No. 3.2e-30; les 79; Conservative 7; Mismatches 19
                                            21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
10-MAS musculus (Mouse).

Mus musculus (Mouse).

Eukaryota, Metazas, Chordata, Craniata, Verte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
Mus musculus (Mouse).
107 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         By similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR007110; Ig-like.
InterPro; IPR003596; Ig_v.
SMART; SM00406; IGv; I.
PROSITE; PS50835; IG_LIKE; I.
Direct protein sequencing; Immunoglobulin
Immunoglobulin V region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP; PO1679; 2FBJ.
SMR; PO1676; 1-107.
Ensembl; ENSMUSGO000062047; Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Framework-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         107
                                                                                                                                                                                                                                                                                                                                                                                                                            Biochemistry 17:5555-5559 (1978)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11584 MW;
STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bind galactan.
```

```
This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR 82
                                                                                                                                                                                                                                                                                                                                                  PubMed=6775525;
Rudikoff S., Rao D.N., Glaudemans C.P.J., Potter M.;
Rkappa Chain joining segments and structural diversity of antibody
combining sites.";
Proc. Natl. Acad. Sci. U.S.A. 77:4270-4274(1980).
-I- MISCELLANEOUS: This chain was isolated from a myeloma protein that
bind galactan.
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Muridae; Murinae; Mus. NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                   PROTEIN SEQUENCE.
MEDLINE-79082830; PubMed=103573;
Rao D.N., Rudikoff S., Potter M.;
Rk chain variable regions from three galactan binding myeloma proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 59.8%; Score 392; DB 1; Length 107; Best Local Similarity 74.3%; Pred. No. 6.3e-30; Matches 78; Conservative 8; Mismatches 19; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Complementarity-determining-1. 
Framework-2. 
Complementarity-determining-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Framework-3.
Complementarity-determining-3.
Framework-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11627 MW; 27A2D022BC0A34D7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PTR; A99420; KVMSX4.

HSSP; P01679; 2FBJ.

SNR; P01679; 1-107.

Ensembl; ENSWUSGO000062047; Mus musculus.

InterPro; IPR007110; Ig-like.

InterPro; IPR007110; Ig-like.

SMART; SM00406; IGy-like.

Direct protein sequencing; Immunoglobulin domain;
Immunoglobulin V region.

REGION

REGION

A 33 Complementarity-determin REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

REGION

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       By similarity.
W -> I (in Ref. 2).
                                                                                                                                                                                                                                                                    Biochemistry 17:5555-5559 (1978)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24
34
49
56
88
97
107
107
AA;
                                                                                                                                                                                                                                                                                                                             PROTEIN SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
```

Search completed: March 20, 2006, 07:32:04 Job time : 25.7968 secs

Title: Perfect score:

Sequence:

protein

ξ

Run on:

Scoring table:

Searched:

Database

Result

```
ig kappa chain pre ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig light chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig kappa chain v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r ig v r i
                                                                                                                                                                                                                                                                                D33730
KVMSX4
S11122
S29592
PT0404
S29584
                                                                                                                                                                                                                                                                                chain îm medain pre chain pre chain pre chain V r chain V r chain V r chain V r chain V r chain V r chain V r chain V r chain V r
                                                                                                                         March 20, 2006, 07:29:34; Search time 4.63412 Seconds (without alignments) 2636.859 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                 US-10-687-035-33
656
1 MDFQVQIFSFLLISASVIMS......XCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              kappa
kappa
kappa
kappa
kappa
kappa
kappa
kappa
kappa
kappa
kappa
kappa
kappa
kappa
kappa
kappa
                 GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                       283416 seqs, 96216763 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             summaries
                                                                                          protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A42248
PL0082
PL0082
B30562
KVMS7B
KVMS7B
KVMS7B
R30560
B49049
S25991
S26338
S25991
S26338
S11118
S263410
S263410
                                                                                                                                                                                                                                                                                BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 100 &
                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *
Query
Match Length D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIR 80: * : pirl: * : pir2: * : pir3: * : pir3: * : pir4: ``

28 9

Gaps

5;

```
A,Title: Immunoglobulin kappa light chain variable region gene complex organization and A,Reference number: A94689; MUID:88331394; PMID:3138286
A,Accession: A32513
A,Molecule type: DNA
A,Residues: 1-130 < KOF>
A,Cross-references: UNIPARC:UPI000114D9C; GB:MZ0834; NID:g196943; PIDN:AAA38846.1; PID:; C;Superfeailly: immunoglobulin V region; immunoglobulin homology
C;Superfeailly: immunoglobulin homology < IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RiFischer, N. 19088, A.; Niersbach, M.; Munziker, W.; Hirsch, H.J.; Kreuzaler, F. submitted to the EMBL Data Library, July 1992
A; Description: Production of a Tobacco mosaic virus (TMV) inactivating neotop specific m A; Reference number: $25057
A; A; Accession: $25058
A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      59 QKPGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFT 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 QKPGSSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISSMEAEDAATYYCQQYSGYPFT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Mus musculus (house mouse)
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 21-Jan-2000
C;Accession: S25058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MDPQVQIPSFLLISASVIMSRGQIVLTQSFAIMSASPGERVTWTCSASSSVSSSYLYWYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSV--IYMCWNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 532; DB 2;
Pred. No. 1.4e-36;
7; Mismatches 14;
                                                                                                                                                                                                                                                                                                                                                                                  Score 533; DB 2;
Pred. No. 6.7e-37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81.1%;
83.5%;
                                                                                                                                                                                                                                                                                                                                                                                      Query Match 81.2%;
Best Local Similarity 83.7%;
Matches 108; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FGTGTKLEI 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-235 <FIS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chain - mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTKLEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Simi
hes 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ig kappa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S25058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  쇰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                Ig kappa chain precursor V region (anti-phenyloxazolone 6F6) - mouse
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 31-Dec-1991 #sequence_revision 09-Aug-1996 #text_change 16-Jul-1999
C;Accession: JiD079; A49044; B49044
R;Kaartinen, M.; Rocca-Serra, J.; Maekelae, O.
A;Title: Combinatorial association of V genes: one VH gene codes for three non-cross-rea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 2
432513

19 kappa chain precursor V region (MRL22) - mouse
C;Species: Mus musculus (house mouse)
C;Date: 21-May-1990 #sequence_revision 31-Dec-1990 #text_change 21-Jan-2000
C;Date: X: Strohal, R.; Balderas, R.S.; Johnson, M.E.; Noonan, D.J.; Duchosal, M.A.;
J. Clin. Invest. 82, 852-860, 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: UNIPARC:UPI000011E8E5; GB:S37664; NID:g250215; PIDN:AAB22332.1; PID: A;Experimental source: BALB/c germ-line
A;Note: sequences extracted from NCBI backbone; partial nucleotide sequences of 13 addit A;Note: sequence extracted from NCBI backbone (NCBIN:106807, NCBIP:106822)
C;Genetics: A;Gene: V(kappa)Ox1
A;Introns: 17/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             residue 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Molecule type: DNA
A;Residues: 1-25 AML5.
A;Cross-references: UNIPARC:UPI000011760C; GB:S37663; NID:9250214; PIDN:AAB22331.1; PID:
A;Note: gequence extracted from NCBI backbone (NCBIN:106802, NCBIP:106809)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 June 1 Ju
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kn hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into C;Superfamily: immunoglobulin V region; immunoglobulin homology

Ksywords: heterotetramer; immunoglobulin predicted <SIG>
F;1-22/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 SGTSPKRWIYDTSKLASGVPARFSGSGSGXSYSLTISSMEAEDAATYYCQQWSSNPLTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F;1-22/Domain: signal sequence #status predicted <SIG>F;23-130/Product: Ig kappa chain V region (6F6) #status predicted <WAT>F;38-111/Domain: immunoglobulin homology <IMM>F;45-109/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 536; DB 1; Length 130;
Pred. No. 3.8e-37;
6; Mismatches 14; Indels
                                     ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81.7%;
84.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        106, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Residues: 114-116 <MIL2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 SGTKLE 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTKLE 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: A49044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession: B49044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S:
Matches 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
```

```
A;Cross-references: UNIPARC:UPI0000116096; EMBL:X67211; NID:954828; PIDN:CAA47650.1; PID C;Superfamily: immunoglobulin V region; immunoglobulin homology F;38-111/Domain: immunoglobulin homology <INM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Accession: S04573
R;Kofler, R.; Noonan, D.J.; Strohal, R.; Balderas, R.S.; Moller, N.P.H.; Dixon, F.J.; Th Eur. J. Immunol. 17, 91-95, 1987
A;Title: Molecular analysis of the murine lupus-associated anti-self response: involveme A;Reference number: S04573; MUID:87133856; PMID:3102255
                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                 61 PGSSPKPWIYGTSTLASGVPTRFSGSGSTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                      1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                            1 MDFQVQIFSFLLISASVIISRGQIVLTQSPAIMSASPGEKVTMTCSASSSVSKWQWYQQK
                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ig kappa chain precursor V region (MRL-histone 7L) - mouse (fragment) C;Species: Mus musculus (house mouse) C;Date: 04-Dec-1992 #sequence_revision 04-Dec-1992 #text_change 21-Ja
                                                                                                                                                                                               ..
0
                                                                                                                              Length 235;
                                                                                                                                                                                           14; Indels
```

名

셤 ઠ

ò

```
A;Cross-references: UNIPARC:UP100001148B9; GB:J04610; NID:g556313; PIDN:AAA50296.1; PID:c
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3iol. Chem. 267, 15552-15558, 1992
tle: Chimeric L6 anti-tumor antibody. Genomic construction, expression, and character
ference number: A42848; MUID:92348410; PMID:1639794
                                                                                                                    J. Biol. Chem. 264, 4513-4522, 1989
A;Title: Variable region primary structures of a high affinity anti-fluorescein immunogle A;Reference number: A32456; MUID:89174706; PMID:2494173
A;Accession: B32456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Accession: A42848; S33902 -
R;Fell, H.P.; Gayle, M.A.; Yelton, D.; Lipsich, L.; Schieven, G.L.; Marken, J.S.; Aruffo,
J. Biol. Chem. 267, 15552-15558, 1992
                                                                                            Dombrink-Kurtzman, M.A.; Johnson, L.S.; Riordan, G.S.; Bedzyk, W.D.; Voss Jr., E.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59 QKPGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFT 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MDFLVQIPSFLLISASVAMSRGENVLTQSPAIMSASPGEKVTMTCRASSSVSSSYLHWYQ 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSV--IYMCWNQ 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Species: Mus musculus (house mouse)
Date: 27-Apr-1991 #sequence_revision 18-Nov-1994 #text_change 21-Jan-2000
                              .989 #sequence_revision 26-Oct-1989 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 QIVLSQSPAILSASPGEKVTLTCRASSSVSPMNWYQQKPGSSPKPWIYATSNLASGVPGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Note: sequence extracted from NCBI backbone (NCBIN:109958, NCBIP:109959); Superfamily: immunoglobulin V region; immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PSGSGSGTSYSLAISRVEAEDAATYYCQQWNSNPLTFGAGTKLEL 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: DNA
A;Residues: 1-107 <FEL>
A;Cross-references: UNIPARC:UPI0000115334; EMBL:M90690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 501; DB 2;
Pred. No. 2.8e-34;
9; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 469; DB 2;
Pred, No. 9.5e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              38-113/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F;16-89/Domain: immunoglobulin homology <IMM>
musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               76.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 85.7%;
Matches 90; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 FGAGTKLEL 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                119 FGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 101; Conserv
                                                                                                                                                                                                                                                       A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-130 <DOM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chain V region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C, Accession: PL0082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u> 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Comment: This protein is an anti-idiotypic antibody that induces an anti-phosphorylchd Superfamily: immunoglobulin V region; immunoglobulin homology Keywords: heterotetramer; immunoglobulin
                                                          EMBL:X14620; NID:952031; PIDN:CAA32773.1; PID
3C for residue 47 as Asn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 QRSGASPKLWIYGTSNLASGVPARPSGSGSGTSXSLTISSVBAEDAATYYCQQYHSDPLT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QKPGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFT 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVBAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 PDTSPKLMIYSTSNLASGVPVRFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                      F:1-22/Domain: signal sequence #status predicted <SIG>
F:23-130/Product: Ig kappa chain V region (fragment) #status predicted <MAT>
F:38-113/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ig kappa chain precursor V region (4C11) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 21-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MDPQVQIFSPLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVI--YMCWNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MHFQVQIFSFLLISASVIMSRGQIVLTQSPAIMSASPGEKVTITCSASSSVSYMHWFQQX
                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :1-22/Domain: signal sequence #status predicted <SIG>
23-129/Product: Ig heavy chain V region (4C11) #status predicted <MAT>
38-111/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          :110-118/Region: complementarity-determining 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           icheng, H.L.; Sood, A.K.; Ward, R.B.; Kieber-Emmons, T.; Kohler, H.O., Immunool. 25, 33-40, 1988
Ol. Immunool. 25, 33-40, 1988
Title: Structurasis of stimulatory anti-idiotypic antibodies. Reference number: PLO011; MUID:88142863; PMID:3125424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 515; DB 2; Length 140;
Pred. No. 2.1e-35;
6; Mismatches 16; Indels
                                                                                                                                                                                                                                                                                                                        79.0%; Score 518; DB 2; Length 130;
80.6%; Pred. No. 1.1e-35;
ive 10; Mismatches 13; Indels
                                                          A;Cross-references: UNIPARC:UPI0000115DFE; EMBL:X14620; NID:952)
A;Note: the authors translated the codon AGC for residue 47 as increased and accompanies of the codon AGC for residue 47 as increased and increased as immunoglobulin bomology C;Keywords: heterotetramer; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;46-55/Region: complementarity-determining 1
;71-77/Region: complementarity-determining 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Residues: 1-140 <CHE>
Cross-references: UNIPARC:UPI00001767A6
Experimental source: cell line 4Cl1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ig kappa chain precursor V region - mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 82.7%;
Matches 105; Conservative
                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 80.6'
Matches 104; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 FGAGTKLEL 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTKLEM 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Accession: PL0013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
```

RESULT

유 ò 셤 ઠે 셤

```
61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C,Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                           A,Note: the sequence shown here is from the V kappa region of an antiidiotypic monoclona (S.Superfamily: immunoglobulin V region; immunoglobulin homology (S.Superfamily: immunoglobulin immunoglobulin homology (S.Feywords: heterotetramer; immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A, Molecule type: mRNA
A, Residues: 1-132 <LEV.
A, Residues: 1-132 <LEV.
A, Cross-references: UNIPARC: UPI0000115DEC; EMBL: X14098; NID: 952562; PIDN: CAA32260.1; PIL
R; Carroll, W.L.; Starnes, C.O.; Levy, R.; Levy, S.
B, Exp. Med. 168, 1607-1520, 1988
A; Title: Alternative V kappa gene rearrangements in a murine B cell lymphoma. An explana
A; Reference number: JL0061; MUID: 89035985; PMID: 3141553
R;Meek, K.; Hasemann, C.; Pollok, B.; Alkan, S.S.; Brait, M.; Slaoui, M.; Urbain, J.; Ca
J. Exp. Med. 169, 519-533, 1989
A;Title: Structural characterization of antiidiotypic antibodies; evidence that Ab2s are
A;Reference number: PL0080; MUID:89094248; PMID:2492056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QIVLSQSPAILSASPGEKVTMTCRASSSVSYMNWYQQKPGSSPKPWESATSNLASGVPAR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 FLLISVIVILINGEIFLTQSPAIIAASPGEKVTITCSASSSVSYNNWYQQKPGSSPKIWI 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10 FLLISASVIMSRĞQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWI 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YGISNIASGVPARFSGSGSGTSFSFTINSMEAEDVATYYCQQRSSYPFTFGSGTKLEI 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70 YGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     196568

19 Kappa chain precursor V-J region (38C13-V1) - mouse (fragment)
19 Kappa chain precursor V-J region (38C13-V1) - mouse (fragment)
19 Kappa chain musculus (house mouse)
19 Kappa chain solution is 1900 in the mouse in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900 in 1900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fil-14/Domain: aignal sequence (fragment) #status predicted <SIG>Fil5-132/Product: Ig kappa chain (fragment) #status predicted <MAT>Fil5-108/Domain: V region (V-kappa-1) <VRE>F:30-103/Domain: immunoglobulin homology <IM>F:30-132/Domain: J region (J-kappa-4) (fragment) <JRE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69.8%; Score 458; DB 2; Length 132; 76.3%; Pred. No. 9.2e-31; ive 10; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 462; DB 2; Length 106;
Pred. No. 3.5e-31;
0; Mismatches 13; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-10 <CAR>
A;Residues: 0.0 <CAR>
A;Coss-references: UNIPARC:UPI0000176789; EMBL:X14098
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FSGSGSGTSYSLTISRVEAEDAATYYCOOWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            - mouse (fragment)
                                                                                                                                                                              A, Accession: PL0082
A, Molecule type: mRNA
A, Residues: 1-106 *MES>
A, Cross-references: UNIPARC:UP100001767ED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ig kappa chain V region (27.10.2) - m
C;Species: Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                            A; Experimental source: strain BALB/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 87.6%;
Matches 92; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 76.3
Marches 90; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: S05268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Accession: JL0062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
```

```
C;Date: 23-Mar-1989 #sequence_revision 23-Mar-1989 #text_change 21-Jan-2000 C;Accession: B30562 R;Sikder, S. K.; Borden, P.; Gruezo, F.; Akolkar, P.N.; Bhattacharya, S.B.; Morrison, S.L. J. Tmmunol. 142, 888-893, 1989 A; Title: Amino acid substitutions in V-H CDR2 change the idiotype but not the antigen-bir A;Reference number: A30562; MUID:89110066; PMID:2464031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: mRNA
A;Residues: 1-129 < KWA>
A;Cross-references: UNIPROT:PO1680; UNIPARC:UP1000002A119; GB:V00780; NID:g51676; PIDN:C?
A;Octos: the sequence was determined from the differentiated gene
C;Comment: This protein, in which there is a deletion of two amino acids at the V-J recon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Introns: 17/1
C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kapp
hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into las
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OKPGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVBAEDAATYYCOOWSSNPFT 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 QIVIJQSPAIMSASPGEKVTMICSASSSVSYMHWYQQKSGTSPKRWYDISKLASGVPTR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ig kappa chain precursor V region (S107B) - mouse
C;Species: Mus musculus (house mouse)
C;Date: 17-Dec-1982 #sequence_revision 17-Dec-1982 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSV--IYMCWNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23 QIVLSQSPAILFASPGETVIMICRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C,Accession: A01943
R;Kwan, S.P.; Max, B.E.; Seidman, J.G.; Leder, P.; Scharff, M.D.
C,Accession: A. P. B. B. B. B. Seidman, J.G.; Leder, P.; Scharff, M.D.
A;Title: Two kappa immunoglobulin genes are expressed in the myeloma S107.
A;Reference number: A01943; MUID:82115300; PMID:6799208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;23-129/Product: Ig kappa chain V region (S107B) #status predicted <MAT>F;38-113/Domain: immunoglobulin homology <IMM>F;45-111/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 452; DB 1; Length 129;
Pred. No. 2.8e-30;
8; Mismatches 21; Indels
                                                                                                                                                                                                  A;Accession: B30562
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-107 c81K-
A;Cross-references: UNIPARC:UPI00001767BA
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heteroterramer; immunoglobulin
P;16-89/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83 FSGSGSGTSYSLTISRVEAEDAATYYCOOWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FSGSGSGTSYSLTISSMEAEDAATYYCQQWSSNPYTFGGGTKLEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 452; DB 2;
Pred. No. 2.3e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1-22/Domain: signal sequence #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 68.9%;
Best Local Similarity 74.4%;
Matches 96; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 82.9°
Matches 87; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119 FGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PGSGTKLEI
```

```
. Molecular analysis of anti-idiotypic monoclonal antibodies in the HLA-DR antige ence number: A49049; MUID:93049629; PMID:1425914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Experimental source: spleen cell
C;Superfamily: immunoglobulin V region; immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Species: Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66.6%;
illarity 82.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                   66.8%;
                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 81.7%;
Matches 85; Conservative
                                                                                                                                                                                       A; Experimental source: BALB/c
                                                                                                         A; Molecule type: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           !g kappa chain V region -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 85; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: mRNA
A; Residues: 1-103 < KAV>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-107 <DEN>
                                                                                A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                    C;Date: 23-Mar-1989 #sequence_revision 23-Mar-1989 #text_change 21-Jan-2000
C;Accession: A30562
C;Accession: A30562
S;Sikder, S.K.; Borden, P.; Guezo, F.; Akolkar, P.N.; Bhattacharya, S.B.; Morrison, S.I. Immunol. 142, 888-893, 1989
A;Title: Amino acid substitutions in V-H CDR2 change the idiotype but not the antigen-bi A;Reference number: A30562; MUID:89110066; PMID:2464031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G30560

1g kappa chain V region (35.8.2H) - mouse (fragment)

C;Species: Mar-1989 #aquence_revision 23-Mar-1989 #text_change 21-Jan-2000

C;Accession: G30560

R;Matsuda, T.; Kabat, E.A.

J. Immunol. 142, 863-870, 1989

A;Title: Variable region cDNA sequences and antigen binding specificity of mouse monoclo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OIVLTOSPAIMSASPGEKVTMTCSASSSVSYMHWYOOKSGTSPKRWIYDTSKLASGVPAR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ig kappa chain V region (anti-idiotypic) - mouse
C;Species: Mus musculus (house mouse)
C;Decies: 19-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 21-Jan-2000
C;Accession: B49049
RiArmandola, E.A.; Mariani, S.M.; Zwickl, M.; Hardman, N.; Ferrone, S.
Bur. J. Immunol. 22, 2893-2899, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QIVLTQSPAIMSASPGEKVTMTCSASSSVSYMHWYQQKSGSSPKTWIYDTSKLASGVPAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FSGSGSGTSYSLTISSMEAEDAATYYCQQWTRNPPFTFGSGTKLEI 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSGSGSGTSYSLTISSMEAEDAATYYCQQWSSNPYTFGGGTKGEI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Accession: G30560
A;Status: preliminary; not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                  C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;16-89/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: UNIPARC:UPI00001767B8
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;16-89/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 448; DB 2; Length 10
Pred. No. 4.9e-30;
5; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Reference number: A30560; MUID:89110062; PMID:2464028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 440.5; DB
Pred. No. 2e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4; Mismatches
                                                    Ig kappa chain V regions (27.7.2 and 27.4b.2) C; Species: Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                            A; Cross-references: UNIPARC: UPI00001767B0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 83.0%;
Matches 88; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch 68.3%;
1 Similarity 82.9%;
87; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Residues: 1-108 <MAT>
                                                                                                                                                                                                                                                                                                                       A;Molecule type: mRNA
A;Residues: 1-107 <SIK>
                                                                                                                                                                                                                                                                  A; Accession: A30562
A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
```

```
A;Cross-references: UNIPARC:UPI0000115F57; EMBL:X59094; NID:952227; PIDN:CAA41820.1; PID C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Accession: PC4405
R;Deng, J.B.; Han, H.; Su, C.Z.; Chen, C.Q.
R;Deng, J.B.; Han, H.; Su, C.Z.; Chen, C.Q.
A;Title: Generation of a phage display library of the immunoglobulin repertoire A;Reference number: PC4405
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 QIVLTQSPAIMSASPGEKVTMTCSASSSVSYMHWYQQKSGTSPKRWIYDTSKLTSGVPAR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 21-Jan-2000
Accession: S29591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ig kappa chain V region (P3, anti-AFP) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 10-Nov-1997 #sequence_revision 23-Jan-1998 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                               23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQXPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 103;
                                                                                                                                                                                                                                                                Length 104;
                                                                                            A;Note: sequence extracted from NCBI backbone (NCBIN:118298, NC
C;Superfamily: immunoglobulin V region; immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83 PSGSGSGTSYSLTISRVEAEDAATYYCQOWSSNPFTFGSGTKLE 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SGSGSGTSYSLTISSMEAEDAATYYCQQWSSNPLTFGAGTKCE 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FSGSGSGTSYSLTISSMEAEDAATYYCQQWSSNPLTFGAGTKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                84 SGSGSGTSYSLTISRVEAEDAATYYCOOWSSNPFTFGSGTKLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Cross-references: UNIPROT: Q8K1F0; UNIPARC: UPI00001767BB
                                                                                                                                                                                                                                                         Score 438; DB 2;
Pred. No. 3.2e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 437; DB 2;
Pred. No. 3.8e-29;
                                                                                                                                                                                                                                                                                                                              5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. 3.8e
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             submitted to the EMBL Data Library, April 1991
A;Reference number: 826459
A;Accession: 829591
                                                                                                                                                             C;Keywords: immunoglobulin
F;16-89/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Superfamily: immunoglobulin V region; immun
C;Keywords: heterotetramer; immunoglobulin
P;15-88/Domain: immunoglobulin homology <IMM>
A, Residues: 1-104 <ARM>
A, Cross-references: UNIPARC: UP100001767AD
```

ò

```
Ristark, S.B.; Caton, A.J.
J. Exp. Mad. 174, 613-624, 1991
A;Title: Matibodies that are specific for a single amino acid interchange in a protein el
A;Reference number: S26309; MUID:91341421; PMID:1908510
                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: UNIPARC:UPI0000115F82; EWBL:X59197; NID:952328; PIDN:CAA41907.1; PID C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin F;16-89/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clacession: Pro406
R;Bebar, S.M.; Lustgarten, D.L.; Corbet, S.; Scharff, M.D.
J. Exp. Med. 173, 731-741, 1991
A;Title: Characterization of somatically mutated S107 VH11-encoded anti-DNA autoantibodi A;Reference number: PT0376; MUID:91147903; PMID:1900082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 QIVLIQSPAIMSASPGEXVIMTCSASSSVSYMHWYQQKSGTSPKRWIYDTSKLASGVPAR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tig kappa chain V region (S107/VH11 group 6-26) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 21-Jan-2000
                                                                                                                                                                     Ig kappa chain V region - mouse
C;Species: Mus musculus (house mouse)
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 20-Jun-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 QIVLTQSPAIMSASPGEKVTISCSASSSVSYMYWYQQKPGSSPKPWIYRTSNLASGVPAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Residues: 1-107 <BEH>
A;Cross-references: UNIPARC:UPI00001767E8
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Koywords: immunoglobulin
F;16-89/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83 PSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 FSGSGSGTSYSLXIXSMEAEDAATYYCQQWSSNPYTFGGGTXXEI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FSGSGSGTSYSLTISSMEAEDAATYYCQQYHSYPPTFGGGTKLEI 105
                       83 FSGSGSGTSYSLTISRVEAEDAATYYCOOWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65.4%; Score 429; DB 2; Length 10 79.0%; Pred. No. 1.8e-28; ive 5; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 432; DB 2;
Pred. No. 9.8e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Search completed: March 20, 2006, 07:36:25 Job time : 5.63412 sec8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            65.9%;
ilarity 81.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 79.vv
Local Similarity 79.vv
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
hes 85, Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                       A;Molecule type: mRNA
A;Residues: 1-105 <STA>
                                                                                                                                                                                                                                                                                                                                                                                             A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
                                                                                                                                                                                                                                                 C; Accession: S26338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Accession: PT0406
83
                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
8
                                                                                                                                                                                                                                                                                                                                                                                                                    19 light chain V region - mouse
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Accession: 338720
R;Cimanis, A.Y.
Submitted to the EMBL Data Library, November 1993
A;Reference number: 538713
A;Reference number: 538720
A;Status: preliminary
A;Rejculus: preliminary
A;Rejculus: preliminary
A;Residues: 1-108 < CIM>
A;Cimanis: A;Residues: UNIVARC:UPI0000117544; EMBL:X76023; NID:9416104; PIDN:CAA53610.1; PI
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: immunoglobulin homology < IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ongoing rearrangeme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ï
                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 18
PS0071

19 kappa chain V region (38C13.V8) - mouse
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 31-Mar-1990 #sequence_revision 31-Mar-1990 #text_change 21-Jan-2000
C;Accession: PS0071
R;Levy, S.; Campbell, M.J.; Levy, R.
J. Exp. Med. 170, 1-13, 1989
A;Title: Functional immunoglobulin light chain genes are replaced by ongoing A;Reference number: A92781; MUID:89310348; PMID:2501443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 QIVLTQSPAIMSASPGEKVTMTCSASSSVSYMHWYQQKSGTSPKRWIYDTSKLASGVPAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                2 IELIOSPAIMSASPGEKVIMICSASSISYMHWYQQKPGTSPKRWIYDTSKLASGVPARF
                                                                                                                                                 24 IVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTRF
                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7;
                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSN-PFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 66.3%; Score 435; DB 2; Length 106; Best Local Similarity 81.0%; Pred. No. 5.7e-29; Matches 85; Conservative 6; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: translation not shown
A;Molecule type: DNA
A;Molecule type: DNA
A;Roidues: 1-106 < LEVy
A;Cross-references: UNIPARC;UPI00001767C9
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;16-89/Domain: immunoglobulin homology < IMM>
                                                                                                                                                                                                                                                                                  SGSGSGTSYSLTISRVEAEDAATYYCQQWRDNPPTFGGGTKLEI 105
                                                                                                                                                                                                                                                   SGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12; Indels
                                                                                               15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                 Score 437; DB 2;
Pred. No. 3.9e-29;
4; Mismatches 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66.4%; Score 435.5; DB 2.80.2%; Pred. No. 5.2e-29; ive 8; Mismatches 12.
  F;16-89/Domain: immunoglobulin homology <IMM>
                                                 ch 66.6%;
l Similarity 81.7%;
85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 80.2
nes 85; Conservative
                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                             g
```

OM protein

Run on:

Sequence:

Title: Perfect

Searched:

Database

Result Š

```
Sequence Sequence 1
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                            Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-11-097-812-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-507-662-45
US-11-097-812-96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661.0
660.7
660.7
660.7
660.7
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
660.5
\begin{array}{c} \mathbf{4} \\ \mathbf{20} \\ 
Appli
Appli
Appli
Appli
Appli
Appli
Appli
                                                                                                                                                     March 20, 2006, 07:32:13 ; Search time 2.37968 Seconds (without alignments) 1527.558 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                    US-10-687-035-33
656
1 MDFQVQIPSFLLISASVIMS......YCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Published Applications AA New:*

1: /cgn2_6/ptodata/2/pubpaa/USO8 NEW PUB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/USO6 NEW PUB.pep:*
3: /cgn2_6/ptodata/2/pubpaa/USO7 NEW PUB.pep:*
4: /cgn2_6/ptodata/2/pubpaa/PCT NEW PUB.pep:*
5: /cgn2_6/ptodata/2/pubpaa/USO7 NEW PUB.pep:*
6: /cgn2_6/ptodata/2/pubpaa/USO7 NEW PUB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/USIO_NEW PUB.pep:*
8: /cgn2_6/ptodata/2/pubpaa/USIO_NEW PUB.pep:*
                      GenCore version 5.1.7 (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-221-900-6
US-11-250-411-94
                                                                                                                                                                                                                                                                                                                                                                                                                      169630 segs, 28622889 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries
                                                                                                                - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                          0.5
                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1130
11330
11330
12336
12336
11007
11007
1100
1100
1100
1100
1100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                         Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     score:
                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60
Sequence 135, App
Sequence 7, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Neges Technologies, Inc.
APPLICANT: Deprese, Shawn
APPLICANT: Deprese, Shawn
APPLICANT: Deprese, Shawn
APPLICANT: Bayer: Robert
APPLICANT: Bayer: Robert
APPLICANT: Bayer: Robert
APPLICANT: Bayer: Robert
APPLICANT: Gene, Xi
TILE REPERENCE: David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Of 10853-01-5052-USO1
TILE REPERENCE: 040853-01-5052-USO1
CURRENT APPLICATION NUMBER: US/11/183,205
PRIOR FILING DATE: 2005-07-15
PRIOR FILING DATE: 2005-07-15
PRIOR FILING DATE: 2005-07-15
PRIOR FILING DATE: 2001-11-28
PRIOR FILING DATE: 2001-11-28
PRIOR FILING DATE: 2002-07-17
PRIOR FILING DATE: 2002-07-17
PRIOR FILING DATE: 2002-06-15
PRIOR FILING DATE: 2002-06-17
PRIOR FILING DATE: 2002-06-17
PRIOR FILING DATE: 2002-07-17
PRIOR PLILING DATE: 2002-07-17
PRIOR PLILING DATE: 2002-06-16
PRIOR FILING DATE: 2002-06-17
PRIOR FILING DATE: 2002-06-17
PRIOR PLILING DATE: 2002-06-17
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-10-09
PRIOR FILING DATE: 2002-09-10
PRIOR FILING DATE: 2002-09-10
PRIOR FILING DATE: 2002-09-10
PRIOR FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87.2%; Score 572; DB 7; Length 128;
89.8%; Pred. No. 6.6e-38;
iive 2; Mismatches 11; Indels
US-11-102-621-135
US-11-174-186-7
                                                                                                                                 ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Sequence 87, Application US/11250411; Publication No. US20060034838A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                   Sequence 60, Application US/11183205; Publication No. US20060030521A1; GENERAL INFORMATION:
      ~ ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 89.8
Matches 114; Conservative
   213
106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GGTKLEI 127
   56.2
56.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
US-11-250-411-87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-183-205-60
   369
368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
   100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

```
Sequence 4, Application US/11090331

Sequence 4, Application US/11090331

BUBLICARIN NO. US20050260210A1

GENERAL INFORMATION

APPLICANT: RAWAKRISHNAN, Vanitha

APPLICANT: RAWAKRISHNAN, Vanitha

APPLICANT: MURAKRISHNAN, Vanitha

APPLICANT: MURAKRISHNAN, Vanitha

APPLICANT: MURAKRISHNAN, Vanitha

APPLICANT: LAW, Debbie

TITLE OF INVENTION: PROLIFERATION

TITLE OF INVENTION: PROLIFERATION

TITLE OF INVENTION: PROLIFERATION

TITLE OF INVENTION UNBER: US/11/090,331

CURRENT PLING DATE: 2004-03-24

PRIOR PILING DATE: 2004-03-24

PRIOR PLILING DATE: 2004-03-24

PRIOR FILING DATE: 2004-03-24

PRIOR FILING DATE: 2006-02-07

PRIOR FILING DATE: 2006-02-07

PRIOR FILING DATE: 2006-02-08

PRIOR FILING DATE: 2005-02-08

PRIOR FILING DATE: 2005-02-28

WUMBER OF SEQ ID NOS: 8

WUMBER OF SEQ ID NOS: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEADDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: KAWADA, YOKO

APPLICANT: KAWADA, YOKO

APPLICANT: NAKAMURA, KAZUYASU

APPLICANT: SHIBUYA, MASABUMI

TITLE OP INVENTION: ANTI-HUMAN VEGF RECEPTOR FLT-1 MONOCLONAL ANTIBODY

TITLE OP INVENTION: ANTI-HUMAN VEGF RECEPTOR FLT-1 MONOCLONAL ANTIBODY

TITLE OP INVENTION: ANTI-HUMAN VEGF RECEPTOR FLT-1 MONOCLONAL ANTIBODY

CURRENT APPLICATION NUMBER: US/11/250,411

CURRENT FILING DATE: 1999-12-03

PRIOR PLILING DATE: 1999-12-03

PRIOR PLILING DATE: 1999-05-20

PRIOR PLILING DATE: 1999-05-20

PRIOR PLILING DATE: 1999-11-21

NUMBER: PCT/JP97/04259

PRIOR PLILING DATE: 1997-11-21

SOFTWARE: PALENTIN VUMBER: PCT/JP97/04259

ROFTWARE: PALENTIN VUMBER: PCT/JP97/04259

SEQ ID NO 87

TENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , OTHER INFORMATION: Description of Artificial Sequence: Synthetic protein US-11-250-411-87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 79.9%; Score 524; DB 7; Length 128; Best Local Similarity 81.9%; Pred. No. 3.3e-34; Matches 104; Conservative 8; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
SHITARA, KENYA
                        ITO, MIKITO
HANAI, NOBUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :|||||:
121 AGTKLEL 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
```

```
121 FGGGTKLEI 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ## Sequence 8, Application US/11090331

## Sequence 8, Application US/20050260210A1

## Sequence 8, Application No. US20050260210A1

## GENERAL INFORMATION:
## APPLICANT: PROTEIN DESIGN LABS, INC.
## APPLICANT: BHASKAR, Vinay
## APPLICANT: HO, Sun.
## APPLICANT: HO, Sun.
## APPLICANT: LAW, Debbie
## TITLE OF INVENTION: PROLIPERATION
## TITLE OF INVENTION: PROLIPERATION
## TITLE OF INVENTION UNMBER: US/11/090,331

## CURRENT APPLICATION NUMBER: US/11/090,331

## CURRENT APPLICATION NUMBER: 60/556,422

## PRIOR PILING DATE: 2004-03-24

## PRIOR APPLICATION NUMBER: 60/556,422

## PRIOR APPLICATION NUMBER: 60/655,049

## PRIOR PILING DATE: 2004-11-03

## PRIOR PILING DATE: 2005-02-07

## PRIOR PILING DATE: 2005-02-07

## PRIOR PILING DATE: 2005-02-08

## PRIOR PILING DATE: 2005-02-28

## PRIOR PILING DATE: 2005-02-28

## PRIOR PILING DATE: 2005-02-28
                                                                                                                                                                                                                                                                                                                                                                  59 OKPGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFT 118
                                                                                                                                                                                                                                                                                                                                                                                                   61 QXPGSAPNLWIYSTSNLASGVPARFSGSGSGTSYSLTISSWRAEDAATYYCHQYLRSPPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59 OKPGSSPKPWIYGTSTLASGVPTRPSGSGSGTSYSLTISRVBAEDAATYYCQQWSSNPFT 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 QKPGSAPNLWIYSTSNLASGVPARFSGSGGTSYSLTISSMEAEDAATYXCHQYLRSPPT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASFGETVTWTCRASSSVI--YMCWNQ 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MDFQVQIFSFLLISASVIMSRGQIVLTQSPAIMSASLGERVTMTCTASSSVSSNYLHWYQ 60
                                                                                                                                                                                                                                                                                            1 MDFQVQIFSFLLISASVIMSRGQIVLTQSPAIMSASLGERVTMTCTASSSVSGNYLHWYQ
                                                                                                                                                                                                                                                                 1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVI--YMCWNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                       ; DB 7; Length 130;
6.9e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 494; DB 7; Length 138;
Pred. No. 7.3e-32;
7; Mismatches 18; Indels
                                                                                                                                                                                                           18; Indels
                                                                                                                                                                                                           7; Mismatches
                                                                                                                                                          75.3%; Score 494; 79.1%; Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: chimeric antibody US-11-090-331-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 75.3%;
Best Local Similarity 79.1%;
Matches 102; Conservative .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 8
SOFTWARE: Patentin version 3.3
SEQ ID NO 8
LENGTH: 138
                                                                                                                                                                                Best Local Similarity 79.1 Matches 102; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 FGGTKLEI 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119 FGSGTKLRI 127
                                                   ; TYPE: PRT
; ORGANISM: mus muscalus
US-11-090-331-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial
SEQ ID NO 4
LENGTH: 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119
                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

```
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ଚ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                    61 PGSSPKPWIYGTSTLASGVPTRPSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 QIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQKPGSSPKPWIYATSNLASGVPVR 60
                                                                                                                                                                                                                                                                     1 MDFQVQIFSFLLISASVIMSRGQIVLTQSPAIMSASLGEBITLTCSASSSVSYMHWYQQK 60
                                                                                                                                                                                                                                   1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60
, OTHER INFORMATION: Description of Artificial Sequence: Synthetic protein US-11-250-411-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       72.4%; Score 475; DB 7; Length 213; 88.6%; Pred. No. 3.1e-30; ive 2; Mismatches 10; Indels
                                                                                          Score 478; DB 7; Length 126;
Pred. No. 1.2e-30;
6; Mismatches 19; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 FSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFGGGTKLEI 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANI: Wata, outlat
TITLE OF INVENTION: OPTIMIZED FC VARIANTS
FILE REFERENCE: A-71366-9
CURRENT APPLICATION NUMBER: US/11/124,620
CURRENT PILING DATE: 2005-05-05
PRIOR PILING DATE: 2004-07-15
PRIOR FILING DATE: 2004-07-15
PRIOR FILING DATE: 2004-07-20
PRIOR FILING DATE: 2004-01-20
PRIOR FILING DATE: 2004-01-09
PRIOR PILING DATE: 2004-11-09
PRIOR PILING DATE: 2004-11-09
PRIOR PILING DATE: 2004-11-10
PRIOR PILING DATE: 2004-11-10
PRIOR FILING DATE: 2004-11-12
PRIOR FILING DATE: 2004-11-12
PRIOR FILING DATE: 2004-01-14
PRIOR PILING DATE: 2004-01-16
PRIOR PILING DATE: 2004-01-16
PRIOR PILING DATE: 2004-03-26
PRIOR PILING DATE: 2004-03-26
PRIOR PILING DATE: 2004-03-26
PRIOR PILING DATE: 2003-09-26
PRIOR PILING DATE: 2003-09-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 6, Application US/11124620
Publication No. US20060024298A1
GENERAL INFORMATION:
APPLICANT: Lazar, Gregory Alan
APPLICANT: Dang, Wei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Desjarlais, John R. APPLICANT: Karki, Sher Bahadur APPLICANT: Vafa, Omid APPLICANT: Hayes, Robert
                                                                                                 Query Match 72.9%;
Best Local Similarity 78.7%;
Matches 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 88.6
Matches 93; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           119 GĠŤĶĽĖÌ 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: nc
US-11-124-620-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                            а
                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

RESULT 8

```
66 PKPWIYAPSNIASGVPARPSGSGSGTSYSLIISKVEAEDAATYYCQOWSFNPPTFGAGTK 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65 PKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTK 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 AFLLASMFVFSIATNAYAQIVLSQSPAILSASPGEKVTMTCRASSSVSYMHWYQQKPGSS 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 SFLLISASVIM----SRGQIVLSQSPAILFASPGETVTWTCRASSSVIYMCWNQQKPGSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9 SPLLISASVIM----SRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
GENERAL INFORMATION:
FULLICATION NO. US20060024300A1
GENERAL INFORMATION:
APPLICATION OF US20060024300A1
FILE REPERENCE: P1990R3C1P1
CURRENT ADPLICATION UNMER: US/11/190,364
CURRENT APPLICATION NUMBER: US/11/190,364
CURRENT APPLICATION NUMBER: US 60/434,115
FRIOR PILING DATE: 2002-07-26
FRIOR PLING DATE: 2003-12-16
FRIOR PLING DATE: 2003-12-01
FRIOR PLING DATE: 2003-12-01
FRIOR PLING DATE: 2003-12-01
FRIOR PLING DATE: 2003-12-16
FRIOR PLING DATE: 2003-12-16
FRIOR PLING DATE: 2003-12-16
FRIOR PLING DATE: 2003-12-16
FRIOR PLING DATE: 2003-12-16
FRIOR PLING DATE: 2003-12-16
FRIOR PLING DATE: 2003-05-07
SEQ ID NO 17
LENGTH: 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 72.4%; Score 475; DB 7; Length 236; Best Local Similarity 78.9%; Pred. No. 3.3e-30; Matches 97; Conservative 4; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 72.4%; Score 475; DB 7; Best Local Similarity 78.9%; Pred. No. 3.3e-30; Matches 97; Conservative 4; Mismatches 18
Sequence 19, Application US/11106820
Publication No. US2006002930a1
GENERAL INFORMATION:
JAPLICANT: BRUNETTA, PAUL G
APPLICANT: SEWELL, KATHRYN L.
ITTLE OF INVENTION: Treatment of Disorders
FILE REFRENCE: P2102R1
CURRENT APPLICATION NUMBER: US/11/106, 820
CURRENT FILING DATE: 2005-04-15
PRIOR APPLICATION NUMBER: US 60/563, 227
PRIOR APPLICATION NUMBER: US 60/565, 098
PRIOR FILING DATE: 2004-04-16
PRIOR APPLICATION NUMBER: US 60/565, 098
PRIOR FILING DATE: 2004-04-16
SPROF FILING DATE: 2004-04-16
SPROF FILING DATE: 2004-04-16
SPROF FILING DATE: 2004-04-16
SPROF FILING DATE: 2004-04-16
SPROF FILING DATE: 2004-04-16
SPROF FILING DATE: 2004-04-12
NUMBER OF SEQ ID NOS: 45
LENGTH: 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: sequence is synthesized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Sequence is chimeric US-11-190-364-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125 LEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          126 LEL 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-11-190-364-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-11-106-820-19
```

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                       66 PKPWIYAPSNLASGVPARFSGSGSGTSYSLTISRVBAEDAATYYCOOWSFNPPTFGAGTK 125
6 AFLLASMFVFSIATNAYAQIVLSQSPAILSASPGEKVTMTCRASSSVSYMHWYQQKPGSS 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6 AFLLASMFVFSIATNAYAQIVLSQSPAILSASPGEKVTWTCRASSSVSYMHWYQQKPGSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SFLLISASVIM----SRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQXPGSS
                                                                                                                                                                                                                                                                                     Sequence 17, Application US/11147780

Publication No. US20060034835A1

GENERAL INFORMATION:

APPLICANT: Adams ET AL.

TILLE OF INVENTION: Immunoglobulin Variants and Uses Thereof

FILE REPRENCE: P1990R3C1

CURRENT APPLICATION NUMBER: US/11/147,780

CURRENT FILING DATE: 2005-06-07

PRIOR APPLICATION NUMBER: US 60/434,115

PRIOR APPLICATION NUMBER: US 60/526,163

PRIOR PILING DATE: 2003-12-06

PRIOR PILING DATE: 2003-12-01

PRIOR PILING DATE: 2003-12-01

PRIOR PILING DATE: 2003-12-01

PRIOR PILING DATE: 2003-12-16

NUMBER OF SEQ ID NOS: 38

SEQ ID NO 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: CHAN, ANDREW C.
APPLICANT: GONG, QIAN
APPLICANT: GONG, QIAN
APPLICANT: MARTIN, FLAVIUS
APPLICANT: MARTIN, FLAVIUS
APPLICANT: MARTIN, Method for Augmenting B Cell Depletion
FILE REFERENCE: P2112R1
CURRENT APPLICATION NUMBER: US/11/107,028
CURRENT FILING DATE: 2005-04-15
PRIOR APPLICATION NUMBER: US 60/563,263
PRIOR PILING DATE: 2004-04-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , DB 7;
3.3e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 475;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Sequence is chimeric
US-11-147-780-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 28, Application US/11107028
Publication No. US20050276803A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 72.4%;
Best Local Similarity 78.9%;
Matches 97; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 52
SEQ ID NO 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Mus musculus US-11-107-028-28
                                                                                                                                    125 LBI 127
                                                                                                                                                                               126 LEL 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LEL 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      125 LBI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 126
                                                                                     셤
                                                                                                                                ò
                                                                                                                                                                      g
                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
```

```
23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 QIVLSQSPAILSASPGEKVTWTCRASSSVSYWHWYQQKPGSSPKPWIYAPSNLASGVPAR 60
                                                                                                                                                                                          1 QIVLSQSPAILSASPGEKVTWTCRASSSVSYMHWYQOKPGSSPKPWIYAPSNLASGVPAR 60
                                                               ò
                                                                                                                          23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 107;
Length 106;
                                                                                                                                                                                                                                                         83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                              FSGSGSGTSYSLTISRVEAEDAATYYCQQWSFNPPTFGAGTKLEL 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 470; DB 7;
Pred. No. 4.2e-30;
2; Mismatches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: BRUNETTA, PAUL G.
APPLICANT: WALICKE, PATRICIA A.
TITLE OF INVENTION: PREVENTING AUTOIMMUNE DIS
FILE REFERENCE: P2079R2
CURRENT APPLICATION NUMBER: US/11/120,338
CURRENT FILING DATE: 2005-05-03
PRIOR PAPLICATION NUMBER: US 60/568,460
PRIOR FILING DATE: 2004-05-05
NUMBER OF SEQ ID NOS: 25
SEQ ID NO 1
TENNO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/11106820
| Publication No. US2006002930A1
| GENERAL INFORMATION:
| GENERAL INFORMATION:
| APPLICANT: SEMELL, KATHRIN L.
| TITLE OF INVENTION: Treatment of Disorders
| TITLE OF INVENTION: Treatment of Disorders
| CURRENT APPLICATION NUMBER: US/11/106,820
| CURRENT PILING DATE: 2005-04-15
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PRIOR FILING DATE: 2004-04-16
| PUBLICANTH DATE: 2004-04-16
| PUBLICANTH DATE: 2004-04-16
   Score 470; DE
Pred. No. 4.2e
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/11120338 Publication No. US20050271658A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 71.6%;
Best Local Similarity 87.6%;
Matches 92; Conservative
   Query Match
Best Local Similarity 87.6%;
Matches 92; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 71.6%;
1 Similarity 87.6%;
92; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 92; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-11-120-338-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-11-106-820-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
```

Φ

```
Query Match
71.6%;
Best Local Similarity 87.6%;
Matches 92; Conservative 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             71.6%;
ilarity 87.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Mus musculus
US-11-143-386-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Mus musculus
US-11-147-780-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
셤
                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
      1 QIVLSQSPAILSASPGEKVIMICRASSSVSYMHWYQQKPGSSPKPWIYAPSNLASGVPAR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 QIVLSQSPAILSASPGEKVIMTCRASSSVSYMHWYQQKPGSSPKPWIYAPSNLASGVPAR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1, Application US/11190364
| Publication No. US20060024300A1
| GENERAL INPORMATION:
| APPLICANT: Adams ET AL.
| TITLE OF INVENTION: Immunoglobulin Variants and Uses Thereof
| FILE REFERENCE: P1990R3CLP1
| CURRENT APPLICATION NUMBER: US/11/190,364
| CURRENT FILING DATE: 2005-07-26
| PRIOR FILING DATE: 2002-12-16
| PRIOR FILING DATE: 2003-12-01
| PRIOR APPLICATION NUMBER: US 60/526,163
| PRIOR PILING DATE: 2003-12-01
| PRIOR PILING DATE: 2003-12-01
| PRIOR FILING DATE: 2003-12-01
| PRIOR FILING DATE: 2003-12-01
| PRIOR FILING DATE: 2003-12-16
| PRIOR FILING DATE: 2003-12-16
| PRIOR FILING DATE: 2003-12-16
| PRIOR FILING DATE: 2003-13-16
| PRIOR FILING DATE: 2003-06-07
| NUMBER OF SEQ ID NOS: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 71.6%; Score 470; DB 7; Length 107; 1 Similarity 87.6%; Pred. No. 4.2e-30; 92; Conservative 2; Mismatches 11; Indels
                                                                                  83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSFNPPTFGAGTKLEL 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 71.6%; Score 470; DB 7; Best Local Similarity 87.6%; Pred. No. 4.2e-30; Matches 92; Conservative 2; Mismatches 11;
                                                                                                                                                                                               Sequence 1, Application US/11143077
PUBLICATION NO. US20060024295A1
GENERAL INFORMATION:
APPLICANT: Brunetta, Paul G.
TITLE OF INVENTION: METHOD FOR TREATING LUPUS
FILE REFERENCE: P2133R1
CURRENT APPLICATION NUMBER: US/11/143,077
CURRENT FILING DATE: 2005-06-02
PRIOR PELING DATE: 2004-06-04
PRIOR FILING DATE: 2004-06-04
PRIOR FILING DATE: 2004-10-11
NUMBER OF SEQ ID NOS: 24
SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 92; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-11-190-364-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-11-143-077-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-11-190-364-1
                                                                 83
                                                               ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                유
                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
```

```
82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 QIVLSQSPAILSASPGEKVTMTCRASSSVSYMHWYQQKPGSSPKPWIYAPSNLASGVPAR 60
1 ÓIVLSÓSPAILSASPGEKVTMTCRASSSVSYMHWYQQKPGSSPKPWIYAPSNLASGVPAR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 QIVLSQSPAILSASPGEKVTMTCRASSSVSYMHWYQQKPGSSPKPWIYAPSNLASGVPAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKFWIYGTSTLASGVPTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                           Sequence 1. Application US/11147780
; Publication No. US20660034835A1
; General INFORMATION:
    APPLICANT: Adams ET AL.
    TITLE OF INVENTION:
    FILE REFERENCE: P1990R3C1
; CURRENT APPLICATION NUMBER: US/11/147,780
; CURRENT APPLICATION NUMBER: US 60/434,115
; PRIOR FILING DATE: 2002-06-07
; PRIOR FILING DATE: 2002-12-16
; PRIOR FILING DATE: 2003-12-16
; PRIOR FILING DATE: 2003-12-01
; PRIOR FILING DATE: 2003-12-01
; PRIOR FILING DATE: 2003-12-01
; NUMBER OF SEQ ID NOS: 38
; SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 470; DB 7; Length 107;
Pred. No. 4.2e-30;
2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                    83 FSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83 FSGSGSGTSYSLTISRVEAEDAATYYCOOWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/11143386
Publication No. US20060051345A1
GENERAL INFORMATION:
APPLICANT: FROHMA, PAUL A.
TITLE OF INVENTION: METHOD FOR TREATING MULTIPLE SCLEROSIS
FILE REPRENCE: P2134R1
CURRENT APPLICATION NUMBER: US/11/143,386
CURRENT FILING DATE: 2005-06-02
PRIOR FILING DATE: 2004-06-04
NUMBER OF SEQ ID NOS: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 470; DB 7;
Pred. No. 4.2e-30;
2; Mismatches 11;
```

g

```
APPLICANT: NAKAMURA, KAZUYASU
APPLICANT: SHIBUYA, MASABUMI
ITILE OF INVENTION: AWII-HUWAN VEGF RECEPTOR FLT-1 MONOCLONAL ANTIBODY
ITILE REFERENCE: 249-107
CURRENT APPLICATION NUMBER: US/11/250,411
CURRENT FILING DATE: 2005-10-17
PRIOR PLICATION NUMBER: US/09/453,718
PRIOR PLICATION NUMBER: 09/315,051
PRIOR PLICATION NUMBER: 09/315,051
PRIOR PLICATION NUMBER: 09/315,051
PRIOR PLICATION NUMBER: 09/119,014
PRIOR PLICATION NUMBER: 09/119,014
PRIOR PLILNG DATE: 1999-05-20
PRIOR PLILNG DATE: 1999-11-21
NUMBER OF SEQ ID NOS: 111
SOFMARE: PATENTIN VEY: 2.1
SEQ ID NO 92
LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MDFQVQIPSFLLISASVIISRGDIQMTQSPSSLSASVGDRVTITCSASSSVSYMHWYQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Artificial Sequence
FRATURE:
OTHER INFORMATION: Description of Artificial Sequence: Synthetic protein
US-11-250-411-92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 IQLTQSPAILSASPGEKVTWTCRASSSVSYIHWFQQKPGSSPKPWIYATSNLASGVPVRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-11-10/028-34

US-11-10/028-34

Sequence 34, Application US/11107028

Publication No. US20050276803A1

GENERAL INPORMATION:
APPLICANT: CHAN, ANDEW C.
APPLICANT: GONG, QIAN
TITLE OF INVENTION: Method for Augmenting B Cell Depletion
FILE REFERENCE: P2112X1

CURRENT APPLICATION NUMBER: US/11/107,028

CURRENT FILING DATE: 2005-04-15

PRIOR PILING DATE: 2004-04-16

NUMBER OF SEQ ID NOS: 52

LENGTH: 106

TYPE: PRT

ORGANISM: Artificial sequence
FEATURE:
FEATURE:
CURRENT SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION SETION NOW SETION SETION NOW SETION SETION NOW SETION SETION NOW SETION SETION NOW SETION SETION NOW SETION NOW SETION SETION NOW SETION NOW SETION NOW SETION SETION NOW SETION NOW SETION SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETION NOW SETIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 7; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 70.4%; Score 462; DB 7; Length 12
Best Local Similarity 72.4%; Pred. No. 2e-29;
Matches 92; Conservative 13; Mismatches 22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 461; DB 7;
Pred. No. 2.1e-29;
3; Mismatches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 70.3%;
Best Local Similarity 86.5%;
Matches 90; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              장. 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ES SPECIFIC FOR LIPOTEICHOIC ACID OF GRAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23 QIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQKPGSSPKPWIYGTSTLASGVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/11/193,440
FILING DATE: 01-Aug-2005
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/09/893,615
FILING DATE: 29-Jun-2001
ATTORNEY/AGENT INFORMATION:
NAME: Estandi, Carol P.
REGISTRATION NUMBER: 32,220
REFERENCE/DOCKET NUMBER: 32,220
TELECONTUNICATION:
TELECONTUNICATION:
TELECONTUNICATION:
THE CONTUNICATION:
HE CONTUNICATION:
THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION THE CONTUNICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: FINNEGAN, HENDERSON, FARABOW, GARRETT
                                                                                                                                                                                                                                                                                                                                                                                                       APPLICAL..
Schumai,
Wong, Hing
Wong, Hing
Stinson, Jeffrey L.
Stinson, Jeffrey L.
CHIMERIC AND PROTECTIVE MOP
CHIMERIC ANTIBODIES SPECT
POSITIVE BACTERIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 467; DB 7;
Pred. No. 7.1e-30;
0; Mismatches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 89:
US-11-193-440-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
ZIP: 20005-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/ME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 1300 I Street, NW
                                                                                                                                                                                                                                             Sequence 89, Application US/11193440
Publication No. US20060002939A1
GENERAL INFORMATION:
APPLICANT: Fischer, Gerald W.
Schuman, Richard F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 89:
SEQUENCE CHARACTERISTICS:
LENGTH: 106 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Washington STATE: DC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 88.6'
Matches 93; Conservative
```

ò

Mon Mar 20 08:49:45 2006

දු පු

Search completed: March 20, 2006, 07:32:42 Job time : 3.37968 secs

```
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Seq
                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Seq
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                     US-10-627-556-693
US-11-089-511-34
US-11-089-511-34
US-11-088-573-34
US-11-088-693-34
US-11-088-693-34
US-11-089-367-34
US-11-089-367-34
US-11-089-368-34
US-10-207-655-33
US-10-207-655-150
US-10-207-655-150
US-10-627-556-691
US-10-627-556-691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-11-089-190-33
US-11-088-570-33
US-11-088-570-33
US-11-088-569-33
US-11-089-693-33
US-11-089-368-33
US-10-207-655-235
US-10-627-556-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JS-10-207-655-387
  Appli
Appli
Appli
Appli
Appli
                                                                                                                                                         March 20, 2006, 07:31:52; Search time 22.544 Seconds (without alignments) 2353.772 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 33, R
Sequence 38, R
Sequence 38, R
Sequence 42, R
                                                                                                                                                                                                                                                    US-10-687-035-33
656
1 MDFQVQIFSFLLISASVIMS......YCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published Applications AA Main:*

(cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*

(cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

(cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

(cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*

(cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*

(cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
                          GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1867569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1-10-327-663-12
3-10-410-930-60
3-10-411-097-60
3-10-287-994-60
3-10-410-913-60
3-10-410-997-60
3-10-410-997-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-053-530-11
US-11-089-511-11
US-11-089-190-11
                                                                                                                                                                                                                                                                                                                                                                                                                     1867569 segs, 417829326 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries
                                                                                                                   protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
```

Query Match

Score

Result No.

 $^{4}$ 

4.5.6

Post-processing:

Database

Scoring table:

Searched:

score:

Title: Perfect

Sequence:

,

protein

ĕ

Run on:

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                 ద
                                                                                                                                                          셤
                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                    ઠે
                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: 776.1 light chain polypeptide variable region (776.1L) US-10-687-035-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUBTEACH IN TRECAMBLE AND CONTROL OF APPLICANT: MA, Jing
APPLICANT: MA, JING
APPLICANT: GUO, Yajun
TITLE OF INVENTION: PREPARATION AND APPLICATION OF
TITLE OF INVENTION: ANTI-TUMOR BIFUNCTIONAL FUSION PROTEINS
FILE REFERENCE: $49062000200
CURRENT APPLICATION NUMBER: US/10/723,003
CURRENT APPLICATION NUMBER: CS/03:10199300
PRIOR PILING DATE: 2003-11-25
PRIOR APPLICATION NUMBER: CN 031292909
PRIOR FILING DATE: 2003-06-13
NUMBER OF SEQ ID NOS: 68
SOFTWARE: PASTESEQ for Windows Version 4.0
SEQ ID NO 38
LENGTH: 129
THENTH: 129
                                                                                                        Sequence 33, Application US/10687035
Publication No. US20050064518A1
Fublication No. US20050064518A1
Fublication No. US20050064518A1
Fublication Solution.
APPLICANT: Albone, Earl F.
APPLICANT: Solutis, Daniel A.
TITLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
TITLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
TITLE OF INVENTION: ANTIBODIES THAT BIND CELL-ASSOCIATED
TITLE OF INVENTION: CA 125/0772P AND METHODS OF USE THEREOF
FILE REFERENCE: 6750-214-999
CURRENT FILING DATE: 2003-10-15
PRIOR FILING DATE: 2003-07-10
PRIOR APPLICATION NUMBER: 60/418,928
PRIOR FILING DATE: 2003-10-12
NUMBER OF SEQ ID NOS: 71
SOFTWARE: PASESEQ for Windows Version 4.0
SEQ ID NO 33
LENGTH: 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 656; DB 5; Length 127; Best Local Similarity 100.0%; Pred. No. 5.9e-49; Matches 127; Conservative 0; Mismatches 0; Indels
ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-723-003-38
; Sequence 38, Application US/10723003
; Publication No. US20040254108A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-723-003-38
                                                                                                US-10-687-035-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

Length 129;

88.1%; Score 578; DB 5;

Query Match

```
ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                     61 PGSSPKPWIYGTSTLASGVPTRFSGSGGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                            61 PGSSPKPWIYATSNIASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PGSSPKPWIYGTSTLASGVPTRPSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILSASPGEKVIMTCRASSSVSYIHWFQQK 60
                                                                                                      9
                                                                                                                                         1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQOK
                                                                                                      1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Gaps
                                   0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 38, Application US/11004639

Publication No. US20050232931A1

GENERAL INFORMATION:

APPLICANT: M. O. Jing

APPLICANT: GUO, Yajun

TITLE OF INVENTION: ANIT-TUMOR BIFUNCTION OF

TITLE OF INVENTION: ANIT-TUMOR BIFUNCTION OF

TITLE OF INVENTION: ANIT-TUMOR BIFUNCTION OF

TITLE OF INVENTION: ANIT-TUMOR BIFUNCTIONAL FUSION PROTEINS

TILE REFERENCE: 549052000200

CURRENT PILING DATE: 2004-12-02

PRIOR PILING DATE: 2003-11-26

PRIOR FILING DATE: 2003-11-25

PRIOR FILING DATE: 2003-11-25

PRIOR FILING DATE: 2003-11-25

PRIOR PRIOR DATE: 2003-11-25

PRIOR FILING DATE: 2003-11-25

PRIOR PRIOR DATE: 2003-10-25

PRIOR PRESENCATION NUMBER: CN 031292909

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 578; DB 6; Length 129;
Pred. No. 3.2e-42;
2; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 42, Application US/10723003
Publication No. US20040254108A1
GENERAL INFORMATION:
APPLICANT: GUO, Vajun
APPLICANT: GUO, Vajun
APPLICANT: GUO, Vajun
APPLICANT: GUO, Vajun
TITLE OF INVENTION: ANTI-TUMOR BIFUNCTIONAL FUSION PROTEINS
FILE REFERENCE: 549062000200
CURRENT PILING DATE: 2003-11-26
PRIOR FILING DATE: 2003-11-25
PRIOR FILING DATE: 2003-11-25
Best Local Similarity 90.6%; Pred. No. 3.2e-42;
Matches 115; Conservative 2; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 90.6%;
Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Mus musculus
US-11-004-639-38
                                                                                                                                                                                                                                                                                                                                                                        121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 4
```

```
8
                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                         61 PGSSPKFWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 PGSSPKPWIYGTSTLASGVPTRPSGSGSGTSYSLTISRVBABDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                              1 MDPQVQIPSFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                1 MDFQVQIPSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 578; DB 5; Length 235;
Pred. No. 5.9e-42;
2; Mismatches 10; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88.1%; Score 578; DB 6; Length 235; 90.6%; Pred. No. 5.9e-42; tive 2; Mismatches 10; Indels
PRIOR APPLICATION NUMBER: CN 031292909
PRIOR FILING DATE: 2003-06-13
NUMBER OF SEQ ID NOS: 68
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 42
LENGTH: 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Synthetic Construct US-11-004-639-42
                                                                                                                                       ; OTHER INFORMATION: Synthetic Construct
US-10-723-003-42
                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                    Query Match
Best Local Similarity 90.6%;
Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 88.1
Best Local Similarity 90.6
Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                              121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                      121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GĞTKÜBİ 127
                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                           ò
```

```
APPLICANT: Leonard, John B.
APPLICANT: Newman, Roland A.
APPLICANT: Newman, Roland A.
APPLICANT: Reset.
APPLICANT: Ratecter, William H.
TITLE OF INVENTION: Therapeutic Application of Chimeric and
TITLE OF INVENTION: RadioLabeled Antibodies to Human B Lymphocyte Restricte
TITLE OF INVENTION: Differentiation Antigen for the Treatment of B-Ceil Lym
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEB: BURNS, DOANE, SWECKER & MATHIS
STREET: 699 Prince St.
CONTY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PGSSPKPWIYATSNIASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MDFQVQIISPLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 3; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 572; DB 3
Pred. No. 1e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/475,813
FILING DATE: 07-JUN-1995
CLASSIFICATION NUMBER: US 08/149,099
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/149,099
FILING DATE: 03-NOV-1993
PRIOR APPLICATION NUMBER: US 07/978,891
PILING DATE: 13-NOV-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/905,928
PILING DATE: 17-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC Compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0.
: Anderson, Darrell R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECONTUNICATION INFORMATION
TELEPHONE: 703-836-6620
TELEFAX: 703-836-2021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPE: amino acide TOPE: amino acide TOPE: amino acide OLEGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Teskin, Robin L.
REGISTRATION NUMBER: 35,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 87.29
Best Local Similarity 89.89
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                     Hanna, Nabi.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; MOLECULE TYPE: protein US-09-905-928-4
                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 22314
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 SGTKLEI 127
```

```
Sequence 60, Application US/10411037
Sequence 60, Application US/2004004346A1
GENERAL INFORMATION:
APPLICANT: Nose Technologies, Inc.
APPLICANT: DeFrees, Shawn
APPLICANT: DeFrees, Shawn
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Chen, Xi
APPLICANT: Chen, Xi
APPLICANT: Bowe, Carlor ALPHA GALACTOSIDASE A: REMODELING AND GLYCOCONJUGATION OF ALPHA TITLE OF INVENTION: ALPHA GALACTOSIDASE A: FILE OF INVENTION NUMBER: US/10/411,037
CURRENT APPLICATION NUMBER: US/10/411,037
CURRENT FILING DATE: 2003-04-09
                                                                                                     APPLICANT: HANNA, NABIL
APPLICANT: HANNA, NABIL
APPLICANT: HANNA, NABIL
APPLICANT: LEONARD, JOHN E.
APPLICANT: LEONARD, JOHN E.
APPLICANT: REWANA, ROLAND A.
APPLICANT: REFF, MITCHELL B.
APPLICANT: REFF, MITCHELL B.
TITLE OF INVENTION: THERAPERITIC APPLICATION OF CHIMERIC AND RADIOLABELED
TITLE OF INVENTION: LYMPHONA B LYMPHOCYTE RESTRICTED
TITLE OF INVENTION: LYMPHONA
TITLE OF INVENTION: DIFFERENTIATION ANTIGEN FOR TREATMENT OF B CELL
TITLE OF INVENTION: DIFFERENTIATION ANTIGEN FOR TREATMENT OF B CELL
TITLE OF INVENTION: UNMBER: US/10/238,681
CURRENT APPLICATION NUMBER: US/10/238,681
CURRENT APPLICATION NUMBER: 08/149,099
PRIOR FILING DATE: 1997-01-03
PRIOR FILING DATE: 1997-11-13
PRIOR FILING DATE: 1992-11-13
NUMBER OF SEQ ID NOS: 11
SSOFID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTWTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 87.2%; Score 572; DB 4; Length 128; Best Local Similarity 89.8%; Pred. No. 1e-41; Matches 114; Conservative 2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/328,523
PRIOR FILING DATE: 2001-10-10
PRIOR FILING DATE: 2001-10-19
PRIOR FILING DATE: 2001-10-19
PRIOR APPLICATION NUMBER: US 60/387,292
PRIOR PLING DATE: 2002-06-07
PRIOR PLING DATE: 2002-06-07
PRIOR FILING DATE: 2002-06-25
Sequence 7, Application US/10238681
Publication No. US20030147885A1
GENERAL INFORMATION:
APPLICANT: ANDERSON, DARRELL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GĞTKLEİ 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Murine sp. US-10-238-681-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                              Leonard, John E.
Newman, Roland A.
Reff, Mitchell E.
Rastetter, William H.
TITLE OF INVENTION: Therapeutic Application of Chimeric and
Radiolabeled Antibodies to Human B Lymphocyte Restricted
Differentiation Antigen for the Treatment of B-Cell Lymphom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PGSSPKPWIYATSNIASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 87.2%; Score 572; DB 4; Length 128; Best Local Similarity 89.8%; Pred. No. 1e-41; Matches 114; Conservative 2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 22314

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
STREET: 699 Prince St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/096,964
FILING DATE: 14-Mar-2002
CLASSIFICATION: cUnknown-
PRIOR APPLICATION STA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
FILING DATE: 07-UN-1993
APPLICATION NUMBER: US 08/149,099
FILING DATE: 03-NOV-1993
APPLICATION NUMBER: US 07/978,891
FILING DATE: 03-NOV-1993
APPLICATION NUMBER: US 07/978,891
FILING DATE: 13-NOV-1992
ATTORNEY/ABENT INFORMATION:
REGISTRATION NUMBER: 35,030
REFERENCE/CONCET NUMBER: 012712-158
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-836-6620
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 128 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 4:
                                                            Sequence 4, Application US/10096964
Publication No. US/20030082172A1
GENERAL INFORMATION:
APPLICANT: Anderson, Darrell R.
                                                                                                                                                                                Hanna, Nabil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 SGTKLEI 127
           RESULT 7
US-10-096-964-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-096-964-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
```

à

```
61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVBAEDAATYYCQQWTSNPPTFG 120
                                                                                                                      61 PGSSPKPWIYGTSTLASGVPTRFSGSGSTSYSLTISRVBAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MDPQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
              CRASSSVIYMCWNQQK 60
                                                                1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Neose Technologies, Inc.
APPLICANT: DeFrees, Shawn
APPLICANT: DeFrees, Shawn
APPLICANT: Zopf, David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Howe, Caryn
TITLE OF INVENTION: GRANULOCYTE COLONY STIMULATING PACTOR: REMODELING AND
TITLE OF INVENTION: GLYCOCONJUGATION OF G-CSF
FILE REFERENCE: 040853-01-5054
CURRENT APPLICATION NUMBER: US/10/410,962
CURRENT FILING DATE: 2003-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 572; DB 4
Pred. No. 1e-41;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILLING DATE: 2001-10-10
PRIOR FILLING DATE: 2001-10-19
PRIOR APPLICATION NUMBER: US 60/384,692
PRIOR APPLICATION NUMBER: US 60/391,797
PRIOR FILLING DATE: 2002-66-07
PRIOR FILLING DATE: 2002-66-25
PRIOR FILLING DATE: 2002-06-17
PRIOR FILLING DATE: 2002-07-17
PRIOR APPLICATION NUMBER: US 60/404,249
PRIOR FILLING DATE: 2002-08-16
PRIOR FILLING DATE: 2002-08-16
PRIOR FILLING DATE: 2002-08-16
PRIOR FILLING DATE: 2002-08-16
PRIOR FILLING DATE: 2002-08-16
SPRIOR FILLING DATE: 2002-08-18
NUMBER OF SEQ ID NOS: 75
SEQ ID NO 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: US 60/328,523
PRIOR FILING DATE: 2001-10-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 60, Application US/10411049
Publication No. US20040082026A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 89.8%;
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Mus musculus
US-10-410-962-60
                                                                                                                                                                                                                                                                121 GGTKLEI 127
                                                                                                                                                                                                                           121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 SGTKLBI 127
                                                                                                                      ò
                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      쥠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: PROTEIN REMODELING METHODS AND PROTEINS/PEPTIDES PRODUCED BY THE TITLE OF INVENTION: METHODS FILE REPRENCE: 040853-01-5053 CURRENT PEPLICATION NOW-SET: 2003-04-09 CURRENT FILING DATE: 2003-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PGSSPKPMIYATSNLASGVPVRPSGSGSGTSYSLTISRVEAEDAATYYCQOWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MDFQVQIISFLLISASVIMSKGQIVLSQSPAILSASPGEKVTWTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MDFQVQIPSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                            DB 4; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 4; Length 128
                                                                                                                                                                                                                                                                                                                                                                                                                                              11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 572; DB 4; Length 12
Pred. No. 1e-41;
2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                 2; Mismatches
PRIOR APPLICATION NUMBER: 05 00404,249
PRIOR FILING DATE: 2002-07-17
PRIOR APPLICATION NUMBER: US 60/407,527
PRIOR PILING DATE: 2002-08-16
PRIOR PILING DATE: 2002-08-28
NUMBER OF SEQ ID NOS: 75
SOFTWARE: Patentin version 3.2
SEQ ID NO 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US 60/328,523
PRIOR PLING DATE: 2001-10-10
PRIOR APPLICATION NUMBER: US 60/344,692
PRIOR PLING DATE: 2001-10-19
PRIOR PLING DATE: 2001-10-19
PRIOR APPLICATION NUMBER: US 60/387,292
PRIOR APPLICATION NUMBER: US 60/391,777
PRIOR APPLICATION NUMBER: US 60/396,594
PRIOR PLING DATE: 2002-06-25
PRIOR PLING DATE: 2002-07-17
PRIOR APPLICATION NUMBER: US 60/404,249
PRIOR APPLICATION NUMBER: US 60/404,249
PRIOR APPLICATION NUMBER: US 60/407,527
                                                                                                                                                                                                                                                                                                                                                                                         87.2%; Score 572;
89.8%; Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Neose Technologies, Inc.
APPLICANT: DeFrees, Shawn
APPLICANT: Zopf, David
APPLICANT: Bayer, Robert
APPLICANT: Hakes, David
APPLICANT: Chen, Xi
                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 89.8°
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 87.2
Best Local Similarity 89.8
Matches 114; Conservative
                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Mus musculus
US-10-411-037-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Mus musculus
US-10-411-026-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
```

ઠે

ઠે

```
APPLICANT: Neose Technologies, Inc.
APPLICANT: Neose Technologies, Inc.
APPLICANT: Defrees, Shawn
APPLICANT: Zopf, David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Chen, Xi
APPLICANT: Chen, Xi
APPLICANT: Bowe, Caryn
TITLE OF INVENTION: INTERFERON BETA: REMODELING AND GLYCOCONJUGATION OF INTERFERON
TITLE OF INVENTION: BETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PGSSPKPWIYGTSTLASGVPTRPSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                          1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPALLFASPGETVTWTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                      Score 572; DB 4; Length 128;
Pred. No. 1e-41;
2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 572; DB 4; Length 128;
Pred. No. 1e-41;
2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE REFERENCE: 040853-01-5056
CURRENT APPLICATION NUMBER: US/10/410,930
CURRENT FILING DATE: 2003-04-09
PRIOR PELING DATE: 2003-04-09
PRIOR FILING DATE: 2001-10-10
PRIOR PLING DATE: 2001-10-19
PRIOR PLING DATE: 2001-10-19
PRIOR APPLICATION NUMBER: US 60/387,292
PRIOR APPLICATION NUMBER: US 60/387,292
PRIOR APPLICATION NUMBER: US 60/387,292
PRIOR PLING DATE: 2002-06-7
PRIOR FILING DATE: 2002-06-7
PRIOR FILING DATE: 2002-06-7
PRIOR FILING DATE: 2002-06-17
PRIOR FILING DATE: 2002-07-17
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-16
PRIOR FILING DATE: 2002-08-18
NUMBER OF SEQ ID NOS: 75
SEQ ID NO S: 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 60, Application US/10410930 Publication No. US20040115168A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87.2%;
                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 89.8%;
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 89.8³
Matches 114; Conservative
NUMBER OF SEQ ID NOS: 63
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 12
LENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Mus musculus
US-10-410-930-60
                                                                                                                               ; TYPE: PRT
; ORGANISM: Mus musculus
US-10-327-663-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |||||||
121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 엽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                        APELICANT: Bayer, Robert
APELICANT: Hakes, David
APELICANT: Hakes, David
APELICANT: Chen, Xi
APELICANT: Chen, Xi
APELICANT: Bowe, Caryn
TITLE OF INVENTION: INTERFERON ALPHA: REMODELING AND GLYCOCONUGATION OF INTERFERON
TITLE OF INVENTION: ALPHA
TITLE OF INVENTION: ALPHA
FILE REPERENCE: 04.0853-01-5055
CURRENT PILING DATE: 2003-04-09
PRIOR PILING DATE: 2001-10-10
PRIOR FLIING DATE: 2001-10-10
PRIOR FLIING DATE: 2001-06-07
PRIOR FLIING DATE: 2002-06-07
PRIOR APPLICATION NUMBER: US 60/391,777
PRIOR APPLICATION NUMBER: US 60/391,777
PRIOR APPLICATION NUMBER: US 60/391,777
PRIOR PILING DATE: 2002-06-07
PRIOR PILING DATE: 2002-06-15
PRIOR FILING DATE: 2002-06-16
PRIOR PILING DATE: 2002-06-16
PRIOR PILING DATE: 2002-08-16
P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Kenya SHITARA
APPLICANT: Mikiko SAKURADA
APPLICANT: Mikiko SAKURADA
APPLICANT: Kenya UGHIDA
APPLICANT: Toyohide SHINKAWA
APPLICANT: Toyohide SHINKAWA
APPLICANT: Mitsuo SATOH
APPLICANT: Myosuke NAKANO
TITLE OF INVENTION: ANTIBODY COMPOSITION WHICH SPECIFICALLY BINDS TO CD20
FILE REFERENCE: 249-289
CURRENT APPLICATION NUMBER: US/10/327,663
CURRENT APPLICATION NUMBER: US 2002-12-24
FRIOR APPLICATION NUMBER: JP 2001-392753
FRIOR APPLICATION NUMBER: JP 2001-392753
FRIOR FILING DATE: 2001-12-25
FRIOR FILING DATE: 2001-12-25
FRIOR FILING DATE: 2001-12-26
FRIOR FILING DATE: 2001-11-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87.2%; Score 572; DB 4; Length 128; 89.8%; Pred. No. 1e-41; ive 2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 12, Application US/10327663 Publication No. US20040093621A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 89.8
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Mus musculus
US-10-411-049-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCIKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-327-663-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
```

Query Match

g

ð

g ઠે

ð

RESULT 13

```
APPLICANT: Chen, x1
APPLICANT: Chen, x2
APPLICANT: Bowe, Caryne
TITLE OF INVENTION: GIYCOPECYLATION METHODS AND PROTEINS/PEPTIDES PRODUCED BY THE
TITLE OF INVENTION: GIYCOPECYLATION METHODS
FILE REPRENCE: 040633-01-5051
CURRENT APPLICATION NUMBER: US 60/328,523
PRIOR PLING DATE: 2001-10-10
PRIOR PLING DATE: 2001-10-10
PRIOR PLING DATE: 2001-10-10
PRIOR APPLICATION NUMBER: US 60/387,292
PRIOR APPLICATION NUMBER: US 60/387,292
PRIOR PLING DATE: 2002-06-07
PRIOR PLING DATE: 2002-06-25
PRIOR PLING DATE: 2002-06-25
PRIOR PLING DATE: 2002-06-16
PRIOR PLING DATE: 2002-07-17
PRIOR PPLICATION NUMBER: US 60/404,249
PRIOR PLING DATE: 2002-07-17
PRIOR PPLING DATE: 2002-07-17
PRIOR PPLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEABDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 PGSSPKPWIYATSNLASGVPVRFSGSGGTSYSLTISRVBABDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Neces Technologies, Inc.
APPLICANT: DeFrees Shawn
APPLICANT: Doff David
APPLICANT: David
APPLICANT: Bayer, Robert
APPLICANT: Bayer, David
APPLICANT: Hakes, David
APPLICANT: Howe, David
APPLICANT: Chen, Xi
TITLE OF INVENTION: REMODELING AND GLYCOCONJUGATION OF PEPTIDES
FILE REFRENCE: 040853-01-5052-00
CURRENT APPLICATION NUMBER: US 60/328,523
PRIOR APPLICATION NUMBER: US 60/328,523
PRIOR APPLICATION NUMBER: US 60/324,692
PRIOR FILING DATE: 2001-10-10
PRIOR FILING DATE: 2001-10-10
PRIOR FILING DATE: 2001-10-10
PRIOR FILING DATE: 2001-10-10
PRIOR APPLICATION NUMBER: US 60/391,777
PRIOR APPLICATION NUMBER: US 60/391,777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 60/391,777
PRIOR FILING DATE: 2002-06-25
PRIOR APPLICATION NUMBER: US 60/396,594
PRIOR FILING DATE: 2002-07-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10287994
o. US20040137557A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 89.8%;
Matches 114; Conservative
      Hakes, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TYPE: PRT
; ORGANISM: Mus musculus
US-10-411-012-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Chen, XI
APPLICANT: Bowe, Caryn
TITLE DE INVENTION: FOLLICLE STIMULATING HORMONE: REMODELING AND GLYCOCONJUGATION OP
TITLE OF INVENTION: FSH
FILE REPRENCE: 040833-01-5059
CURRENT APPLICATION NUMBER: US/10/410,997
PRIOR APPLICATION NUMBER: US/10/410,997
PRIOR APPLICATION NUMBER: US/0328,523
61 PGSSPKPWIYATSNLASGVPVRPSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MDFQVQIPSFLLISASVIMSRGQIVLSQSPAILFASPGBTVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 4; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 87.2%; Score 572; DB 4; Length 12 Best Local Similarity 89.8%; Pred. No. 1e-41; Matches 114; Conservative 2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US 50/328,523

PRIOR APPLICATION NUMBER: US 60/344,692

PRIOR APPLICATION NUMBER: US 60/347,292

PRIOR PILING DATE: 2001-10-19

PRIOR PILING DATE: 2002-06-07

PRIOR PILING DATE: 2002-06-25

PRIOR PILING DATE: 2002-06-25

PRIOR PILING DATE: 2002-06-25

PRIOR PILING DATE: 2002-06-25

PRIOR PILING DATE: 2002-06-16

PRIOR PILING DATE: 2002-06-16

PRIOR PILING DATE: 2002-06-16

PRIOR PILING DATE: 2002-08-16

**SEQ ID NO 60

**LENGTH: 128
                                                                                                                                                                                                                                                                                                            us20040126838A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10411012
No. US20040132640A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Neose Technologies, Inc.
APPLICANT: DeFrees, Shawn
APPLICANT: Zopf, David
APPLICANT: Bayer, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                    DeFrees, Shawn
Zopf, David
Bayer, Robert
Hakes, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Mus musculus
US-10-410-997-60
                                                                                                                                       121 GGTKLEI 127
                                                                                             121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GĞTKLBİ 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 16
                                      유
                                                                                                                                                    용
                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

g

g δ

8

```
GRERAL INCOMATION:
APPLICANT: Nocae Technologies, Inc.
APPLICANT: DeFrees, Shawn
APPLICANT: DoFrees, Shawn
APPLICANT: DoFrees, Shawn
APPLICANT: DoFrees, Shawn
APPLICANT: Bayer, Robert
APPLICANT: Bayer, Robert
APPLICANT: Bayer, Robert
APPLICANT: Bayer, Robert
APPLICANT: Bayer, Robert
APPLICANT: Bayer, Robert
APPLICANT: Bayer, Caryn
ITLE REFERENCE: 04063-01-506
CURRENT FILING DATE: 2003-04-09
FRIDE REFERENCE: 04063-01-506
CURRENT FILING DATE: 2001-10-10
FRIOR FILING DATE: 2001-10-19
FRIOR FILING DATE: 2002-06-25
FRIOR FILING DATE: 2002-06-25
FRIOR FILING DATE: 2002-06-25
FRIOR FILING DATE: 2002-06-25
FRIOR FILING DATE: 2002-06-25
FRIOR FILING DATE: 2002-06-25
FRIOR FILING DATE: 2002-06-25
FRIOR FILING DATE: 2002-06-25
FRIOR FILING DATE: 2002-06-25
FRIOR FILING DATE: 2002-08-16
FRIOR FILING DATE: 2002-08-16
FRIOR FILING DATE: 2002-08-16
FRIOR FILING DATE: 2002-08-16
FRIOR FILING DATE: 2002-08-16
FRIOR FILING DATE: 2002-08-16
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FILING DATE: 2002-08-28
FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR FRIOR 
                                                                                                                                                                   61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PGSSPKPWIYATSNIASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                           61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCOOWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTWTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87.2%; Score 572; DB 5; Length 128; 89.8%; Pred. No. 1e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Sequence 60, Application US/10410897; Publication No. US20050100982A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 60, Application US/10410980 Publication No. US20050031584A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 89.84
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: PRT
; ORGANISM: Mus musculus
US-10-410-980-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              127
                                                                                                                                                                                                                                                                               121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                   121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTKLEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 20
US-10-410-897-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                           à
                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Noces recentlo.09125, 110.

APPLICANT: DeFrees, Shawn
APPLICANT: Zopf, David
APPLICANT: Zopf, David
APPLICANT: Zopf, David
APPLICANT: Eaver, Robert
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Hakes, David
APPLICANT: Offer, William METHODS
TITLE OF INVENTION: METHODS
TITLE OF INVENTION: METHODS
TITLE OF INVENTION: METHODS
TITLE OF INVENTION: METHODS
TITLE OF INVENTION: METHODS
TITLE OF INVENTION: METHODS
TITLE OF INVENTION: METHODS
TITLE OF INVENTION: UNMBER: US 60/344,692
PRIOR PELICATION NUMBER: US 60/391,777
PRIOR APPLICATION NUMBER: US 60/391,777
PRIOR APPLICATION NUMBER: US 60/391,777
PRIOR PLING DATE: 2002-06-17
PRIOR FILING DATE: 2002-07-17
PRIOR PLING DATE: 2002-07-17
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-16
PRIOR PLING DATE: 2002-08-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEABDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 572; DB 4; Length 128;
Pred. No. 1e-41;
2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87.2%; Score 572; DB 4; Length 12
89.8%; Pred. No. 1e-41;
tive 2; Mismatches 11; Indels
       PRIOR APPLICATION NUMBER: US 60/404,249
PRIOR FILING DATE: 2002-08-16
PRIOR APPLICATION NUMBER: US 60/407,527
PRIOR FILING DATE: 2002-08-28
NUMBER OF SEQ ID NOS: 62
SOFTWARE: Patentin version 3.1
SEQ ID NO 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 60, Application US/10410913 Publication No. US/200401142856A1 GENERAL INFORMATION: APPLICANT: Neose Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           89.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 89.8
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 87.2
Best Local Similarity 89.8
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      trype: PRT
CORGANISM: Mus musculus
US-10-410-913-60
                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Mus musculus
US-10-287-994-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 SGTKLEI 127
```

APPLICANT: Neose Technologies, Inc.

1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60

```
ITLE OF INVENTION: PACTOR IX; REMODELING AND GLYCOCONJUGATION OF FACTOR IX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 87.2%; Score 572; DB 5; Length 128; Best Local Similarity 89.8%; Pred. No. 1e-41; Matches 114; Conservative 2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 2002-08-16
PRIOR PRIOR PLICATION NUMBER: U.
PRIOR PLICATION NUMBER: US 60/407,527
PRIOR PLILING DATE: 2002-08-28
NUMBER OF SEQ ID NOS: 75
SEQ ID NO 60
LENGTH: 128
"WHE PART OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PARTIES OF THE PA
                                                                             FILE REFERENCE: 040853-01-5537
CURRENT APPLICATION NUMBER: US/10/410,897
CURRENT FILING DATE: 2003-04-09
PRIOR APPLICATION NUMBER: US 60/328,523
PRIOR FILING DATE: 2001-10-10
                                                                                                                                                                                                                                                                                                                                                                                   DR FILING DATE: 2001-10-10

PRAPLICATION NUMBER: US 60/344,692

PRILING DATE: 2001-10-19

R APPLICATION NUMBER: US 60/387,292

PRAPLICATION NUMBER: US 60/391,777

PRILING DATE: 2002-06-07

PRILING DATE: 2002-06-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 60/396,594 FILING DATE: 2002-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

Search completed: March 20, 2006, 07:35:09 Job time : 23.5444 secs 121 GGTKLEI 127 g

121 SGTKLEI 127

PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVBAEDAATYYCQQWSSNPFTFG 120 61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVBAEDAATYYCQQWTSNPPTFG 120

61

ઠે

셤 ઠે

셤

1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60

THIS PAGE BLANK (USPTO)

```
Sequence 61,
Sequence 19,
Sequence 28,
Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Seq
                                                                                                                                                                                                                                                                                                       Sequence Sequence Sequence Sequence Sequence
                                                                                                                                                              Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Seq
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S-08-783-853A-105
S-08-344-050-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-071-485-69
US-09-171-945-52
US-09-910-059-52
US-08-116-778E-37
US-08-438-562-37
                                      -08-483-389-80

-08-487-113D-80

-08-473-503-80

-08-483-932-80

-08-720-420A-80
                                                                                                                                                                                                                                                                                                                                                                 S-10-195-752-113
S-09-011-769A-27
S-09-339-596A-24
S-08-659-567-2
                                                                                                                                                                                                                                                                                                                             -10-195-752-111
-09-393-385B-113
                                                                                                                                                                                                                                                                                  -08-652-558-41
-09-393-385B-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -09-344-050-11
-08-783-853A-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-483-528B-101
US-08-836-561-33
US-09-434-122-33
                                                                                                                                                                                                                                            -08-232-246A-25
I-US95-07372-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-190-199A-61
US-09-419-788-19
US-09-948-004-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   519
513.5
513.5
513.5
513.5
513.5
513.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  449.5
449.5
445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Appl
Appli
Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Appl
Appli
Appli
Appli
Appli
Appli
Appli
                                                                                                                                March 20, 2006, 07:30:27; Search time 6.76331 Seconds (without alignments) 1552.466 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to have a
being printed,
                                                                                                                                                                                                                 US-10-687-035-33
656
1 MDFQVQIFSFLLISASVIMS......YCQQWSSNPFTFGSGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence Sequence 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to becore greater than or equal to the score of the result bein and is derived by analysis of the total score distribution
                GenCore version 5.1.7 (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ued_Patents AA:*
/cgn2_6/ptodata/1/iaa/5_COMB.pep:*
/cgn2_6/ptodata/1/iaa/f_COMB.pep:*
/cgn2_6/ptodata/1/iaa/H_COMB.pep:*
/cgn2_6/ptodata/1/iaa/H_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/RE_COMB.pep:*
/cgn2_6/ptodata/1/iaa/RE_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-475-81188-7

US-08-475-81184-46

US-09-630-138-46

US-09-630-138-46

US-09-423-433-18

US-09-423-439-18

US-09-423-439-18

US-09-423-431-2

US-09-238-741-2

US-09-238-741-2

US-09-238-741-2

US-09-238-741-2

US-09-116-24-5

US-08-116-24-5

US-08-116-24-5

US-08-116-778E-2

US-08-483-562-2

US-08-483-562-2

US-08-483-562-2

US-08-483-568-2

US-08-483-568-2

US-08-483-568-2

US-08-483-568-2

US-08-483-568-2

US-08-483-568-2

US-08-483-568-2

US-08-483-568-2

US-08-483-568-2

US-08-483-568-2

US-08-483-568-2

US-08-483-568-2

US-08-477-728-31
                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -09-910-059-17
                                                                                                                                                                                                                                                                                                                                                              572060 segs, 82675679 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                               - protein search, using sw model
                                                                                                                                                                                                                                                                                                   BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Copyright
```

Query Match

Result No.

Post-processing:

Database

score:

Title: Perfect

Sequence:

OM protein

Run on:

Scoring table:

Searched:

982233335555 1988883335555 198883335555 1988833355555

## ALIGNMENTS

```
RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                Sequence 4, Application US/08476275

Sequence 10. 5776456

GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Anderson, Darrell R.
APPLICANT: Henna, Nabil
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPLICANT: Reff, Mitchell E.
APPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVIMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 87.2%; Score 572; DB 1; Length 128; Best Local Similarity 89.8%; Pred. No. 3.2e-50; Matches 114; Conservative 2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPOTER: IBM PC compatible
COMPANE: BATENIN PC-DOS/NS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/476,275
FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/149,099
FILING DATE: 03-NOV-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/978,891
FILING DATE: 13-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: TESKIN ROBIN L.
REGISTRATION NUMBER: 35,030
REFERENCE/DOCKET NUMBER: 012712-155
TELECOMMUNICATION INFORMATION:
TELEFERK: 703-836-6620
TELEFERK: 703-836-6620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 703-836-2021
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 128 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 699 Prince St.
CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein US-08-476-275-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

GGTKLEI 127

```
APPLICANT: ANDERSON, DARRELL R.
APPLICANT: HANNA, NABLL
APPLICANT: HANNA, NABLL
APPLICANT: HANNA, NABLL
APPLICANT: REFF, MITCHELL E.
APPLICANT: REFF, MITCHELL E.
APPLICANT: REFF, MITCHELL E.
APPLICANT: REFF, MITCHELL E.
APPLICANT: RASTSTTER WILLIAM H.
TITLE OF INVENTION: THERAPEUTIC APPLICATION OF CHIMERIC AND
TITLE OF INVENTION: LYMPHOMA
NUMBER OF SEQUENCES: 11
CORRESPONDENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: PILLSBURY WINTHROP
STREET: 1100 New YORK Avenue, N.W., Ninth FL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVBABDAATYYCOOWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 PGSSPKPWIYATSNLASGVPVRFSGSGGTSYSLTISRVEAEDAATXYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87.2%; Score 572; DB 2; Length 128;
89.8%; Pred. No. 3.2e-50;
tive 2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CUMPOIDER: LIBER FO. COMPACTION CONTRACTORY SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/475,815B FILING DATE: 07-JUN-1995
CLASSIFICATION: DATA: PRIOR PAPLICATION DATA: APPLICATION NUMBER: US 08/149,099 FILING DATE: 03-NOV-1993
PRIOR BAPLICATION NUMBER: US 07/978,891
FILING DATE: 13-NOV-1992
APPLICATION NUMBER: 13-NOV-1992
ATTORNEY/AGENT INFORMATION: NAME: TESKIN, Robin L. REGISTRATION NUMBER: 35.030
REFERENCE/DOCKET NUMBER: 35.030
REFERENCE/DOCKET NUMBER: 35.030
REFERENCE/DOCKET NUMBER: 35.030
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFRAX: 202-861-3000
TELEFRAX: 202-822-0944
SURVENCE CHARACTERISTICS:
Sequence 7, Application US/08475815B Patent No. 6399061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 1100 New York Avenue, CITY: Washington STATE: DC COUNTRY: USA ZIP: 20005 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/WS-DC COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTER: COMPUTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 89.8
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 SGTKLBI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GGTKLEI 127
                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-475-815B-7
```

```
121 SGTKLBI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 AĞTKÜBL 127
                                                          FITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                           APPLICANT: Hanna, Nabil
APPLICANT: Hanna, Nabil
APPLICANT: Honna, Nabil
APPLICANT: Leonard, John B.
APPLICANT: Newman, Roland A.
APPLICANT: Reff, Mitchell B.
APPLICANT: Rastetter, William H.
APPLICANT: Rastetter, William H.
TITLE OF INVENTION: Therapeutic Application of Chimeric and
TITLE OF INVENTION: Radiolabeled Antibodies to Human B Lymphocyte Restricted
TITLE OF INVENTION: Differentiation Antigen for the Treatment of B-Cell Lymphoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 87.2%; Score 572; DB 2; Length 128; Best Local Similarity 89.8%; Pred. No. 3.2e-50; Matches 114; Conservative 2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/475,813
FILING DATE: 07-000-1995
CLASSIFICATION ALA
PRICATION NUMBER: US/08/475,813
FILING DATE: 07-000-1995
FILING DATE: 07-000-1993
PRICR APPLICATION DATA:
APPLICATION NUMBER: US 08/149,099
FILING DATE: 03-000-1993
PRICR APPLICATION DATA:
APPLICATION NUMBER: US 07/978,891
FILING DATE: 13-000-1992
ATTORNEY/AGENT INFORMATION:
NAME: Teskin, Robin L.
REGISTRATION NUMBER: 35,030
REPREBENCE/DOCKET NUMBER: 35,030
REPREBENCE/DOCKET NUMBER: 012712-158
TELECOMMUNICATION INFORMATION:
TELECHOME: 703-895-6620
                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS STREET: 699 Prince St. CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 22314
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
US-09-724-138-46
; Sequence 46, Application US/09724138
; Patent No. 6622852
; GENERAL INFORMATION:
Sequence 4, Application US/08475813
Patent No. 6682734
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENČE ADDRESS:
ADDRESSEE: BURNS, DC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-475-813-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

```
| TITLE OF INVESTIGATE, Deficient, Deficient of Deficient to Human B Call Surface Anti-
| TITLE OF INVESTIGATE, Deficient Chinetic Antibody with Specificity to Human B Call Surface Anti-
| TITLE OF INVESTIGATION CHINETIC ANTIBOLOGY
| UNDESTITATION CHINETIC AND PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY
```

```
linear
TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-423-439-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                       61 PGSSPKPWIYAPSNLASGVPARFSGSGSGTSYSLTISRVEAEDAATYYCQQWSFNPPTFG 120
                                                                                                                                                                                                                                                    PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                            1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: ADAIR, John Robert
APPLICANT: BODWER, Mark William
APPLICANT: BODWER, Mark William
APPLICANT: WOUNTAIN Andrew
APPLICANT: OWENS, Raymond John
TITLE OF INVENTION: CDR Grafted Anti-CEA Antibodies and
TITLE OF INVENTION: Their Production
NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 3000 K Street, N.W., Suite 500
CITY: Washington, D.C.
                                                                                                   Length 128;
                                                                                                                                    11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/449,287
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/154,389
                                                                                             Score 566; DB 2;
Pred. No. 1.3e-49;
4; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40283/110 CARA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
PAPPLICATION NUMBER: PCT GB91/01108
FILING DATE: 05-JUL-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 9014932.9
FILING DATE: 05-JUL-1990
PRIOR APPLICATION NUMBER: PCT GB90/02017
FILING DATE: 21-DEC-1990
ATTORNEY/AGENT INFORMATION:
NAME: SAXE, BETNHARD D.
REGISTRATION NUMBER: 28,665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 2000-5109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Palazze
                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-449-287-2; Sequence 2, Application US/08449287; Patent No. 5877293; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX: 904136
INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS: LENGTH: 129 amino acids TYPE: amino acids
                                                                                                 86.3%;
88.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (202) 672-5300
(202) 672-5399
                                                                                                                                    Matches 112; Conservative
   ; LENGTH: 128
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-630-198-46
                                                                                                                                                                                                                                                                                                                               SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                   121 AGTKLEL 127
                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                         გ
                                                                                                                                                                                                                                                                                                                                 ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PGSSPKSWIYATSNIASGVPARFSGSGSGTSYSLTISRVEAEDAATYYCQHWSSKPPTFG 120
                                                                                                                                                                                                                            61 PGSSPKFWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                  1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                        1 MDFOVOIESFLLISASVIMSRGOIVLSOSPAILFASPGETVTMTCRASSSVIYMCWNQOK
                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85.2%; Score 559; DB 2; Length 235; 88.2%; Pred. No. 1.4e-48; tive 1; Mismatches 14; Indels
                                                                                                 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: EMERY, Stephen Charles
BLAKEY, David Charles
TITLE OF INVENTION: CHEMICAL COMPOUNDS
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
ADDRESSER: Pillabury Winthrop, L.L.P.
STREET: 1100 New York Ave., N.W.
                                                        Score 559; DB 1;
Pred. No. 6.6e-49;
1; Mismatches 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/423,439
FILING DATE: 09-No. 6339070-1999
CLASSIFICATION: «Unknown>
PRIOR APPLICATION NUMBER: PCT/GB98/01294
FILING DATE: 05-MAY-1998
APPLICATION NUMBER: GB 9709421.3
FILING DATE: 10-MAY-1997
INFORMATION FOR SEQ ID NO: 18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: MS Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: protein
;
SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-09-423-439-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 18, Application US/09423439
Patent No. 6339070
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 235 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS: single
                                                          Query Match
Best Local Similarity 88.2%;
Matches 112; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 88.21
Matches 112; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
, MOLECULE TYPE: protein US-08-449-287-2
                                                                                                                                                                                                                                                                                                                 121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                          121 GGTKLEI 127
```

```
61 PGSSPKPWIYGTSTLASGVPTRFSGSGGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PGSSPKSWIYATSNLASGVPARFSGSGSGTSYSLTISRVEAEDAATYYCQHWSSKPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MDFQVQIFSFLLISASVIMSRGQTVLSQSPAILSASPGEKVTMTCRASSSVTYIHWYQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: HANNA, NABIL
APPLICANT: HANNA, NABIL
APPLICANT: HARIHARAN, KANDASAMY
APPLICANT: LABARRE, MICHAEL J.
APPLICANT: HUNH, TRI B.
TITLE OF INVENTION: PRODUCTION OF TETRAVALENT ANTIBODIES
CURRENT APPLICANTION NUMBER: US/09/238,741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVT
                                                                 ADDRESSEE: Pillabury Madison & Sutro, LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85.2%; Score 559; DB 2; 88.2%; Pred. No. 1.4e-48; ative 1; Mismatches 14
                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
APPLICATION NUBBER: US/09/011,769A
FILING DATE: 13-Feb-1998
CLASSIFICATION **CURRENTS**
APPLICATION NUMBER: PCT/GB96/01975
FILING DATE: 13-AUG-1996
FILING DATE: 12-JUN-1996
APPLICATION NUMBER: GB 9612295.7
FILING DATE: 12-JUN-1996
APPLICATION NUMBER: GB 9611019.2
FILING DATE: 25-MAY-1996
APPLICATION NUMBER: GB 9516810.0
FILING DATE: 16-AUG-1995
INFORMATION FOR SEQ ID NO: 23:
                                                                                                           CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDLUM TYPE: 1.44 Mb disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: MS Word
                                                                                          STREET: 1100 New York Ave., N.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 23:
US-09-011-769A-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 85.2
Best Local Similarity 88.2
Matches 112; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS:
SOFTWARE: Patentin Ve.
SEQ ID NO 2
LENGTH: 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    쉺.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 PGSSPKSWIYATSNLASGVPARFSGSGSGTSYSLTISRVEAEDAATYYCQHWSSKPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MDFQVQIFSFLLISASVIMSRGQTVLSQSPAILSASPGEKVTWTCRASSSVTYIHWYQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match

85.2%; Score 559; DB 2; Length 235;
Best Local Similarity 88.2%; Pred. No. 1.4e-48;
Matches 112; Conservative 1; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/423,439
APPLICATION NUMBER: US/09/423,439
CLASSIFICATION: UNKNOWN:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/GB98/01294
PILING DATE: 05-MAY-1998
APPLICATION NUMBER: GB 9709421.3
FILING DATE: 10-MAY-1997
INFORMATION FOR SEQ ID NO: 58:
                                                                                                                                                                                                                              APPLICANT: EMERY, Stephen Charles
BLAKERY, David Charles
TITLE OF INVENTION: CHEMICAL COMPOUNDS
NUMBER OF SEQUENCES: 60
CORRESPENDENCE ADDRESS:
ADDRESSEE: 9118burry Winthrop, L.I
STREET: 1100 New York Ave., N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: MS Word
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 58:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 23, Application US/09011769A Patent No. 6436691 GENERAL INFORMATION:
                                                                                                                                                              Application US/09423439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 235 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HENNEQUIN, Lauren
MARSHAM, Peter R.
DOWELL, Robert I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                            CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: D.C.
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLAKEY,
DAVIES,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HENNAM
121 SGTKLEI 127
                                         121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 20005
                                                                                                                                                                                  Patent No. 6339070
GENERAL INFORMATION:
                                                                                                                                      09-423-439-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-423-439-58
  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

0; Gaps

```
61 SGTSPKIWIYDTSNIASGVPARFSGSGSGTSYSLTISSMEAEDAATYYCQQWSSDPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                       61 PGSSPKPWIYGTSTLASGVPTRFSGSGGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATE: BETG. Ellen L.
TITLE OF INVENTION: Cross-Reacting Monoclonal Antibodies
TITLE OF INVENTION: Specific for E-Selectin and P-Selectin
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend Khourie and Crew
STREET: One Market Plaza, Steuart Tower, Suite 2000
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 548; DB 4; Length 128;
Pred. No. 8.4e-48;
6; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/07302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION UNDRER:
APPLICATION UNDRER:
FILING DATE: 14-JUNE-94
ATTORNEY/AGENT INFORMATION:
NAME: Smith, William M.
REGISTRATION NUMBER: 30,223
REFERENCE/DOCKET NUMBER: 11823-005810PC
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                    Sequence 2, Application PC/TUS9507302 GENERAL INPORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: 415-326-2400
TELEFAX: 415-326-2422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 85.8°
Matches 109; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , MOLECULE TYPE: protein
PCT-US95-07302-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 SGTKLEI 127
                                                                                                                                                                121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 94105
                                                                                                                                                                                                                                                                                                 CT-US95-07302-2
                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                               a
                                                                                                                                                                  ઠે
                                                                                                                                                                                                     셤
                                                                     Š
                                                                                                                                                                                                                                                                                                                           61 PGSSPKRWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEABDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                    61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                     1 MDFQVQIISFILLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                            1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fatent No. 6210670

GENERAL INFORMATION:
APPLICANT: Berg, Ellen L.
TITLE OF INVENTION:
TITLE OF INVENTION: Specific for E-Selectin and P-Selectin NUMBER OF SEQUENCES: 10
CORRESPONDENCES: 10
CORRESPONDENCES: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: California
                                                                                                                                                                  ö
                           CTHER INFORMATION: Description of Artificial Sequence:
COTHER INFORMATION: "Dimeric" Anti-CD20 Light Chain (Version 1)
US-09-238-741-2
                                                                                                                      Length 235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12; Indels
                                                                                                                                                                13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Flopped disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
SOFTWARE: Patentin Release #1.0, Version #1.30
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/619,491
FILING DATE: 07-JUN-1995
PRIOR APPLICATION NUMBER: WO PCT/US95/07302
PRIOR APPLICATION NUMBER: US 08/259,963
FILING DATE: 14-JUN-1994
ATTORNEY/AGENT INPORMATION:
NAME: Storella, John R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 548; DB 2;
Pred. No. 8.4e-48;
6; Mismatches 12;
                                                                                                                 85.1%; Score 558; DB 2;
88.2%; Pred. No. 1.7e-48;
tive 2; Mismatches 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        011823-005810US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 128 antho acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Storella, John R. REGISTRATION NUMBER: 32,944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83.5%;
                                                                                                                      Query Match
Best Local Similarity 88.2
Matches 112; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 109, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , MOLECULE TYPE: protein US-08-619-491-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                          121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                               121 GGAKLEİ 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: San
STATE: Ca
COUNTRY:
                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                     ઠે
```

US-07-946-421-26

1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60

9

Gaps

ö

```
61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVBABDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASFGETVTWTCRASSSVIYMCWNQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: woodcock Washburn Kurtz Mackiewicz & No. 5859205ris
CITY: One Liberty Place - 46th Floor
STREET: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Woodcock Wasburn Kurtz Mackiewicz & No. 5929212ris
STREET: One Liberty Place - 46th Ploor
CITY: Philadelphia
STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 543; DB 1; Length 235;
Pred. No. 5.7e-47;
5; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Joiliffe, Linda K.
APPLICANT: Zivin, Robert A.
APPLICANT: Zivin, Robert A.
APPLICANT: Adair, John R.
APPLICANT: Athwal, Diljeet S.
TITLE OF INVENTION: CD3 Specific Recombinant Antibody
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
                                                                                                                                               COMPUTER READABLE FORW:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/303,569B
FILING DATE: 07-SEP-1994
GTASSIFICATION NUMBER: 35,719
REFERENTE TRUJILO, Dozeen Yatko
REGISTRATION NUMBER: 35,719
REFERENCY COCKET: 35,719
REFERENCY COCKET: 35,719
REFERENCY (215) 568-3439
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3439
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 235 amino acide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/116,247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 5, Application US/08116247
Patent No. 5929212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82.8%;
85.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compation operating System: PC-DOS SOFTWARE: Patentin Releasor
                                                                     CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 85.03
Matches 108; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                  CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 SGTKLBI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-303-569B-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PGSSPRLLIYDTSNLASGVPVRFSGSGSGTSYSLTISRMEAEDAATYYCQQWSSHIFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MDFQVQIFSFLLISASVILSRGQIVLTQSPAIMSASPGEKVTMTCSASSSVTYMYWYQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 82.8%; Score 543; DB 1; Length 128; Best Local Similarity 85.8%; Pred. No. 2.7e-47; Matches 109; Conservative 6; Mismatches 12; Indels
APPLICANT: Bendig, Mary M.
APPLICANT: Bendig, Mary M.
APPLICANT: Saldanha, Jose
TITLE OF INVENTION: Humanized and Chimeric Monoclonal
TITLE OF INVENTION: Attibodies
NUMBER OF SEQUENCES: 42
CORRESPONDENCE ADDRESS:
STREET
                                                                                                                                                                                                                                                                                                                                                                                                                 Humanised Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 5, Application US/08303569B
Patent No. 5858205
GENERAL INFORMATION:
APPLICANT: Adair, John R.
APPLICANT: Athwal, Diljeet S.
APPLICANT: Butage, John S.
TILLE OF INVENTION: Humanised Antib
NUMBER OF SEQUENCES: 31
                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                Sequence 26, Application US/07946421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 703-243-6410
TELEX: 64191
INFORMATION FOR SEQ ID NO: 26:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : 128 amino acids
amino acid
                                                                                                                                                                                                                                                         CITY: Arlington
STATE: Virginia
COUNTY: U.S.A.
ZIP: 22201
COMPUTER READABLE FORM:
MEDIUM IYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TOPOLOGY: linear
US-07-946-421-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
US-08-303-569B-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
```

ö

```
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
CRGANISM: Mouse
US-09-348-224-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 17
US-09-348-224-5
                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCOOWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQX 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MDFQVQIFSFLLISASVIISRGQIVLTQSPAIMSASPGEKVTWTCSASSSVSYMWYQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 5, Application US/09795515
Sequence 5. Application US/09795515
Settent No. 6632927
GENERAL INFORMATION:
APPLICANT: Adair, John R.
APPLICANT: Emtage, John S.
TITLE OF INVENTION: Humanised Antibodies
NUMBER OF SEQUENCES: 30
CORRESPONDENCE ADDRESS:
ADDRESSE: Woodcock Washburn Kurtz Mackiewicz & No. 6632927ris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 82.8%; Score 543; DB 1; Length 235; Best Local Similarity 85.0%; Pred. No. 5.7e-47; Matches 108; Conservative 5; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZOPTER: PA
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: BEATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/795,515
                    CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 07/743,377
FILING DATE: 10-0CT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Paintin, Francis A.
REGISTRATION NUMBER: 19,386
REPERBNCE/DOCKET NUMBER: CARP-0011
TELEPOMMUNICATION INFORMATION:
TELEPOMMUNICATION INFORMATION:
TELEFAX: (215) 568-3100
TELEFAX: (215) 568-3109
TELEFAX: (215) 568-3109
TELEFAX: (215) 568-3109
TELEFAX: (215) 568-3109
TELEFAX: (215) 568-3109
TELEFAX: (215) 568-3109
TELEFAX: (215) 568-3109
TELEFAX: (215) 568-3109
TELEFAX: (215) 368-3109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/846,658
FILING DATE: 01-MAY-1997
ATTORNEY/AGENT INFORMATION:
NAME: Trujillo, Doreen Yarko
REGISTRATION NUMBER: 35,719
REFERENCE/DOCKET NUMBER: 35,719
TELECOMMUNICATION INFORMATION:
TELECHONE: (215) 568-3439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 / MOLECULE TYPE: protein US-08-116-247-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-795-515-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

```
61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                           1 MDFQVQIFSFLLISASVIISRGQIVLTQSPAIMSASPGEKVTMTCSASSSVSYMNWYQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                      Gaps
                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 543; DB 2; Length 235;
Pred. No. 5.7e-47;
5; Mismatches 14; Indels
                                                                                                                                  Query Match
82.8%; Score 543; DB 2; Length 235;
Best Local Similarity 85.0%; Pred. No. 5.7e-47;
Matches 108; Conservative 5; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: 2011jeffe, Linda Kay
APPLICANT: 2011jeffe, Linda Kay
APPLICANT: 21vin, Robert Allan
APPLICANT: Achwal, Diljeet Singh
TITLE OF INVENTION: CD3 Specific Recominant Antibody
FILE REFERENCE: CARPOGE: US/09/348,224
CURRENT APPLICATION NUMBER: US/09/348,224
CURRENT FILING DATE: 1999-07-06
EARLIER APPLICATION NUMBER: 08/116,247
EARLIER PLING DATE: 1993-09-03
EARLIER PILING DATE: 1991-10-04
NUMBER OF SEQ ID NOS: 29
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 18
US-08-116-778E-2
; Sequence 2, Application US/08116778E
; Patent No. 5830470
; GENERAL INFORMATION:
; APPLICANT: NAKAMURA, KAZUXASU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/09348224
Patent No. 6750325
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 85.0%;
Matches 108; Conservative 5
235 amino acids
                                         ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-795-515-5
                                                                                                                                                                                                                                                                                                                                                                                                                           121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 SGTKLEI 127
                      amino acid
```

```
61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPPTFG 120
                                                                                                                                                                                                                                                                                                            APPLICANT: NAKAWURA, KAZUYASU
APPLICANT: NAKAWURA, KASUYASU
APPLICANT: SHITARA, KENYA
APPLICANT: HANAI, NOBUO
APPLICANT: KUWANA, YOSHIHISA
APPLICANT: KUWANA, YOSHIHISA
APPLICANT: HASEGAWA, MAMORU
TITLE OF INVENTION: HUMANIZED ANTIBODIES
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & VANDERHYE P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3: NIXON & VANDERHYE P.C. 1100 NORTH GLEBE ROAD
                                                                                                                                                                                                                                                 Sequence 2, Application US/08438562
Patent No. 5874255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 129 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
NAME/KEY: domain
LOCATION: 24..33
IDENTIFICATION METHOD: B
IDENTIFICATION METHOD: W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: -22...1
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: sig_peptide
                                                                                       121 SGTKLEI 127
                                                                                                                             121 GGrKLBI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: ARLINGTON
STATE: VIRGINIA
COUNTRY: U.S.A.
                                                                                                                                                                                                                           JS-08-438-562-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                          셤
                                                                                                                             셤
                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY SIMILARITY
WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WITH KNOWN SEQUENCE TO TO AN ESTABLISHED CONSENSUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81.1%; Score 532; DB 1; Length 129; 84.3%; Pred. No. 3.5e-46; Live 6; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: domain
LOCATION: 24..33
LDENTIFICATION BY SIMILARITY
LDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESTIMENTIFICATION METHOD: CONSENSUS
OTHER INFORMATION: /product= "HYPERVARIABLE REGION 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: domain
LOCATION: 49..55
LDENTIFICATION METHOD: BY SIMILARITY
LDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESTIMENTIFICATION METHOD: CONSENSUS
OTHER INFORMATION: /product= "HYPERVARIABLE REGION 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: 88..96
LOCATION: BES..96
LDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESTIMATIFICATION METHOD: CONSENSUS
OTHER INFORMATION: /product= "HYPERVARIABLE REGION 3"
                                                                                                                                                                                                                                                 STATE: VIKGINIA

COMPUTRY: U.S.A.

ZIP: 22201-4714

COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: PLOPY disk
COMPUTER: DATE FORM: DC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
GURENT APPLICATION DATA: US/08/116,778E
FILING DATE: 07-SEP-93
CLASSIFICATION: 424
ATYORNEY/AGENT INFORMATION:
NAME: WILSON, MARY J.
REGISTRATION INFORMATION:
TELEBHONE: (703) 816-4100
TELEBHONE: (703) 816-4100
TELEBPAX: (703) 816-4100
TELEBPAX: 129 amino acids
                                                           APPLICANT: KUMANA, YOSHIHISA
PEDLICANT: HASEGRAWA, MAMORU
TITLE OF INVENTION: HUMANIZED ANTIBODIES
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BY SIMILARITY
KOIKE, MASAMICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: sig_peptide
LOCATION: -22...1
IDENTIFICATION METHOD: E
IDENTIFICATION METHOD: VIOLATION METHOD: VIOLATION METHOD: VIOLATION METHOD: C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 129 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 81.3
Best Local Similarity 84.3
Matches 107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: domain
                                                                                                                                                                                                                       CITY: ARLINGTON STATE: VIRGINIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-116-778E-2
```

1 MHFQVQIFSFLLISASVIMSRGQIVLTQSPAIMSASPGEKVTITCSASSSVSYMHWFQQK 60 1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK

ઠ

```
61 PGTSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISRWEAEDAATYYCQQRSSYPYTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDENTIFICATION METHOD: BY SIMILARITY
IDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
IDENTIFICATION METHOD: CONSENSUS
OTHER INFORMATION: /product= "HYPERVARIABLE REGION 1"
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY SIMILARITY
WITH KNOWN SEQUENCE TO TO AN ESTABLISHED
CONSENSUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:

MEDIUM TYPE Floppy disk

COMPUTER READABLE FORM:

MEDIUM TYPE Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/438,562

FILING DATE: 10-MAY-95

CLASSIFICATION NUMBER: 08/116,778

PILING DATE: 07-SEP-93

CLASSIFICATION: 424

ATTONETY/AGENT INFORMATION:

NAME: WILLSON, MARY J.

REGISTRATION NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

RESTERENCE/DOCKET NUMBER: 32,955

REGUIENCE CHARACTERISTICS:

LEMOTH: 129 anino acids

LEMOTH: 129 anino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: domain
LOCATION: 49..55
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
```

```
Search completed: March 20, 2006, 07:31:34 Job time: 7.76331 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PGTSPXLWIYSTSNLASGVPARFSGSGSGTSYSLTISRMEAEDAATYYCQQRSSYPYTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                         1 MHFQVQIFSFLLISASVIMSRGQIVLTQSPAIMSASPGEKVTITCSASSSVSYMHWFQQK 60
                                                                                                                                                                                                                                                                                                                                               1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BY SIMILARITY WITH KNOWN SEQUENCE TO TO AN ESTABLISHED CONSENSUS
                                                                 NAME/KEY: domain
LOCATION: 88..96
IDENTIFICATION METHOD: BY SIMILARITY
IDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
IDENTIFICATION METHOD: CONSENSUS
OTHER PROPERTIES / product = "HYDERVARIABLE REGION 3"
US-08-438-562-2
                                                                                                                                                                                                                                                 81.1%; Score 532; DB 1; Length 129; 84.3%; Pred. No. 3.5e-46; Live 6; Mismatches 14; Indels
IDENTIFICATION METHOD: CONSENSUS OTHER INFORMATION: /product= "HYPERVARIABLE REGION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/483,528B
FILLIG DATE: 07-JUN-95
CLASSIFICATION: 536
TELECOMUNICATION INFORMATION:
TELECOMUNICATION INFORMATION:
TELEPAK: (703)816-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: KOIKE, MASAMICHI
APPLICANT: SHITARA, KENYA
APPLICANT: SHITARA, KENYA
APPLICANT: KUWANA, YOSHIHISA
APPLICANT: KUWANA, YOSHIHISA
APPLICANT: HASEGAWA, MAMORU
TITLE OF INVENTION: HUMANIZED ANTIBODIES
NUMBER OF SEQUENCES: 103
CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4.
US-08-483-528B-92
i Sequence 92, Application US/08483528B
; Patent No. 5939532
; GENERAL INFORMATION:
; APPLICANT: NAKAMURA, KAZUYASU
; APPLICANT: SHIYBAA, KENYA
APPLICANT: SHIYBAA, KENYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: U.S.A.
2IP: 22201-4714
COMPUTER READABLE FORM:
COMPUTER: Floppy disk
COMPUTER: ISM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (703)816-4100
INFORMATION FOR SEQ ID NO: 92:
SEQUENCE CHARACTERISTICS:
LENGTH: 129 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: sig_peptide
LOCATION: -22..1
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                      Query Match 81.1
Best Local Similarity 84.3
Matches 107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTKLBI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: ARLINGTON STATE: VIRGINIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
```

```
61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                   NAME/KEY: domain
LOCATION: 49.55
LDENTIFICATION WETHOD: BY SIMILARITY
LDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
LDENTIFICATION METHOD: CONSENSUS
OTHER INFORMATION: /product= "HYPERVARIABLE REGION 2"
                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: domain

LOCATION: 88.-296

IDENTIFICATION METHOD: BY SIMILARITY
IDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESTABLISHED

IDENTIFICATION METHOD: CONSENSUS

OTHER INFORMATION: /product= "HYPERVARIABLE REGION 3"
US-08-483-528B-92
                                                 BY SIMILARITY
WITH KNOWN SEQUENCE OR TO AN ESTABLISHED
CONSENSUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match

81.1%; Score 532; DB 1; Length 129,
Best Local Similarity 84.3%; Pred. No. 3.5e-46;
Matches 107; Conservative 6; Mismatches 14; Indels
                       LOCATION: 24..33
IDENTIFICATION METHOD: BY SIMILARITY
IDENTIFICATION METHOD: WITH KNOWN SEQUENCE OR TO AN ESIDENTIFICATION METHOD: CONSENSUS
OTHER INFORMATION: /product= "HYPERVARIABLE REGION 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GGTKUBI 127
domain
```

```
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
```

OM protein - protein search, using sw model

Run on:

March 20, 2006, 07:28:19; Search time 45.9655 Seconds (without alignments) 1213.978 Million cell updates/sec

US-10-687-035-33 656 1 MDPQVQIPSFLLISASVIMS......YCQQWSSNPFTFGSGTKLEI 127 Title: Perfect score:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

Sequence:

2443163 segs, 439378781 residues Searched:

2443163 Potal number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 100 summaries

geneseqp2001s:\* geneseqp2002s:\* geneseqp2003as:\* geneseqp2003bs:\* geneseqp2004s:\* geneseqp1980s:\* geneseqp1990s:\* geneseqp2000s: A\_Geneseq\_21:\* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Anti-IL2R 2BB light Novel chi Anti-CD20 Novel chi Murine im Murine FU Protein r Mature va Fucosyltr Human C2B Antibody Antibody Sequence 2 H7 VL g Light cha 2H7 antib Murine va Anti-CD20 Murine an Mouse ant Mouse ant Description Abr55872 Abu0833 Adc6628 Ade6368 Ade73083 Adr5060 Adr49732 Adx29908 Adx29908 Adx29908 Adx2933 Adx2933 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 Adx2033 SUMMARIES ADE73083 ADF60660 ADN49732 ADY21925 AAP70628 AAP94781 AAW10243 AAW10589 ADE85686 ABB82834 Query Match Length DB Score Result ģ

. .

| ٠,  |                  |       | •    |      |      | . •   |      |            |       |       | •     |       |      |       |              |        |          |              |       |       |                  |       |       |       |       |        |        |        |        |        |        | . •    | •     |     |       |       |            | •     |         |         |         |               |         |            |                                                                                          |         |     | •   |    | ٠.  |      |            |          |      |
|-----|------------------|-------|------|------|------|-------|------|------------|-------|-------|-------|-------|------|-------|--------------|--------|----------|--------------|-------|-------|------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|-----|-------|-------|------------|-------|---------|---------|---------|---------------|---------|------------|------------------------------------------------------------------------------------------|---------|-----|-----|----|-----|------|------------|----------|------|
|     | Mous             | Mouse | MOUR | 2H7  | Immi | Bindi | Synt | Mouse      | Humar | Humar | Humar | Bindi | Bind | 2H780 | Mouse 2H     | Antibo | Mouse 2H |              | Bindi | Bindi |                  | Mouse | Antib | Mouse | Rindi | Antibo | Synthe | Synthe | Bindir | Bindir | Bindir | 2H78CI | 2H78C |     | Mouse | Mouse | Mouse      | Mouse | Binding | Binding | Binding | Binding       | Binding | Binding    | Binding                                                                                  | Binding |     |     |    |     |      |            | Antibody |      |
| 3   | 1034             | 751   | 707  | 90   | 202  | 545   | 272  | 339<br>422 | 183   | 981   | 183   | 55    | 347  | 274   | 24 L         | 21.4   | 242      | 2 6          | 347   | 558   | 541              | 44    | 214   | 242   | 64.7  | 164    | 202    | 2 5    | 558    | 345    | 345    | 73.5   | 272   | 273 | 33.0  | 339   | 43         | 43    | 82      | 571     | 833     | 822           | 583     | 382        | 567                                                                                      | 579     | 178 | 176 | 79 | 99  | 28   | 93         | Ady21683 | 178  |
|     |                  |       |      |      |      |       |      |            |       |       |       |       |      |       |              |        |          |              |       |       |                  |       |       |       |       |        |        |        |        |        |        |        |       |     |       |       |            |       |         |         |         |               |         |            |                                                                                          |         |     |     |    |     |      |            |          |      |
| :   | 2 2              | 12    | 2 2  | 608  | 202  | 245   | 272  | 239        | 183   | 98    | 83    | 55.5  | 47   | 74    | 4 4<br>4 7   | 114    | 542      | 45           | 47    | 558   | 47.4             | 44    | 14    | 242   | 6 6   | 64     | 25     | 200    | 558    | 45     | 245    | 733    | 172   | 73  | 33,0  | 539   | 43         | 43    | 82      | 371     | 83      | 822           | 83      | 92         | 67                                                                                       | 379     | 78  | 76  | 79 | 9   | 78   | 93         | ADY21683 | 78   |
| •   | N (1             | 01    | 40   | 4 4  | ۲,   | ٠ ر   | 7    | თ თ        | 0     | σ,    | o 1   | n r   | -    | r (   | ס ס          | 0      | σ,       | ם ח          | , ,   | ۲,    | - 0              | 0     | σ,    | σ (   | ט ע   | . 0    | S I    | n n    | 0 5    | 7      | ۲ ،    |        | 7     | ٥ م | , o   | 6     | 0 0        | 0     | ۲ ،     |         | ۲ ،     |               | 7       | <u>ر</u> د |                                                                                          | 7       | თ ი | 0   | σ, | ט ס | 6    | σ σ        | י ט      | D    |
| - 0 | N 0              | N     | 40   | 10   | 2    | 9     | 9    | 99         | 9     | 9     | oς    | 4 N   | 10   | 2     | 7 C          | 10     | 2        | ~ 0          | œ     | 8     | 30 C             | 00    | 8     | σο 0  | σ α   | 9      | 6      | σο     | no     | 9      | 0 0    | v Q    | 6     | σσ  | u ou  | 6     | თ თ        | 0     | 0       | 00      | 0       | 00            | 0       | 0          | 0                                                                                        | 0       | 00  | 0   | 0  | о с | 0    | $\circ$    | 200      | •    |
|     | 86.3<br>86.3     | 86.3  | 200  | 86.3 | 9    | o o   | 9    | o c        | 9     | 9     | 9     | oo    | · w  | 9     | ש פ          | ø      | 9        | 9            | o o   | 9     | ש פ              | v     | 9     | 9     | ש פ   | o o    | 9      | 9      | o w    | 9      | S V    | oω     | 9     | o c | 9 9   | 9     | ωv         | w     | o v     | oω      | 9       | o o           | 9       | 9          | o w                                                                                      | 9       | 9 4 | ·   | 9  | øv  | 86.3 | oν         | 86.3     | 86.3 |
|     | ဖ် ဖ             | 9     | 9    | o    | 9    | 9     | 9    | 99         | 9     | 9     | o v   | oo    | 9    | 9     | שפ           | ø      | 9        | 9            | Θ     | 9     | שפ               | νō    | 9     | Ö۷    | ی م   | Ō      | 9      | Θú     | οō     | 9      | Ø v    | ōΘ     | Ö     | Θű  | οŌ    | ٠Ō ۱  | ت ت        | Θ     | Ø G     | øΘ      | Ū١      | ت ت           | Θ       | 9          | ρŒ                                                                                       | Ō       | ώv  | οō  | Ū٠ | ت ت | 99   | ΘŒ         | 266      | Ģ.   |
| į   | 7<br>7<br>7<br>8 | 27    | 9 0  | 3 6  | 31   | 3.2   | 34   | 35         | 37    | 38    | o c   | 4 4   | 42   | 43    | 4. 4<br>4. 7 | 4 4    | 47       | 4, 4<br>00 0 | 20    | 51    | 5<br>2<br>7<br>7 | 5.4   | 55    | 26    | , c   | 2 6    | 09     | 61     | 9 6    | 64     | 65     | 62     | 89    | 69  | 7.    | 72    | 7.3<br>4.5 | 75    | 76      | 78      | 79      | 8<br>18<br>18 | 82      | 83         | # 45<br>60<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80 | 98      | 87  | 9 6 | 06 | 91  | 60   | <b>0</b> գ | 96       | 97   |
|     |                  |       |      |      |      |       | ٠.   |            |       |       |       |       |      |       |              |        |          |              |       |       |                  |       |       |       |       |        |        |        |        |        |        |        |       |     |       |       |            |       |         |         |         |               |         |            |                                                                                          |         |     |     |    |     |      |            |          |      |

```
The present invention describes an isolated antibody, or an antigen-
binding antibody fragment (1), that preferentially binds cell-associated
CC Aliz5/0772 polypeptide relative to shed CA 125/0772 polypeptide. Also
CC Aliz5/0772 polypeptide relative to shed CA 125/0772 polypeptide. Also
CC amonoclonal antibody that competes with binding of (II); (3) a hybridoma
CC amonoclonal antibody that competes with binding of (II); (3) a hybridoma
CC amonoclonal antibody that composition comprising an antibody or an
antigen-binding ancibody fragment that preferentially binds cell-
associated CA 125/0772P polypeptide relative to shed CA 125/0772P
CO pypeptide, and a carrier; (6) a pharmaceutical composition comprising
CC (II); (5) a pharmaceutical composition comprising
CC antiported, and a carrier; (6) a pharmaceutical composition comprising
CD polypeptide, and a carrier; (7) an article
CM monoclonal antibody, or an antigen-binding material and a composition
CC comprising an antibody, or an antigen-binding material and a composition
CC comprising an antibody, or an antigen-binding material, and
CC composition in a form suitable for administration to a subject; (8) a
CC composition in a form suitable for administration to a subject; (8) a
CC composition in a form suitable for administration to a subject; (8) a
CC suitabody fragment, which preferentially binds cell-associated CA
CC composition in a form suitable for administration to a subject; (8) a
CC antibody fragment, which preferentially binds cell-associated CA
CC composition in a form suitable for administration to a subject; (8) a
CC antibody fragment, which preferentially binds cell-associated CA
CC angent; (9) ampliorating (M1) a symptom of a CA 125/0772P-related disorder
CC (10) a monoclonal antibody (V1) bosen from 325.1, 621.1, 633.1, 654.1,
CC (10) a monoclonal antibody (V1) bosen from 325.1, 621.1, 619,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel isolated antibody, or antigen-binding antibody fragment binding with cell-associated CA 125/0772P polypeptide relative to shed CA 125/0772 polypeptide, useful for ameliorating cervical or ovarian cancer.
                                                                                                                                                                                                                                                                                                                                                                                  antibody; antigen-binding antibody fragment; cell-associated CA 125/0772P; monoclonal antibody; cytostatic; mimunostimulant; mediator of lysis; tumour; cell proliferative disorder; cancer; cervical cancer; uterine cancer; breast cancer; lung cancer; ovarian cancer.
Ady21789 Antibody
Ady21653 Antibody
Ady21933 Antibody
                                                                                                                                                                                                                                                                                                                                         Antibody 776.1 light chain variable region (776.1L) SEQ ID NO:33
                                                                                                            ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 32; SEQ ID NO 33; 153pp; English.
  ADY21789
ADY21653
ADY21933
                                                                                                                                                                                                                 ADS94334 standard; protein; 127 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-OCT-2002; 2002US-0418828P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-OCT-2003; 2003WO-US032945.
    თთთ
                                                                                                                                                                                                                                                                                                   (first entry)
    200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (EURO-) EUROCELTIQUE SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Albone EF, Soltis DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2004-357171/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; ADS94343.
    86.3
86.3
86.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2004035537-A2
                                                                                                                                                                                                                                                                                                   02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-APR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
    566
566
566
                                                                                                                                                                                                                                                           ADS94334;
                                                                                                                                                                                             ADS94334
    98
```

```
antibody fragment; (11) an antibody or antigen binding antibody fragment that competes with (11), and (12) a pharmaceutical composition comprising (VI) and a carrier. (11) has cytostatic activity, and can be used as an immunostimulant and a mediator of lysis of positive tumour cell. (1) is useful for ameliorating a symptom of a CA 125/O7P-related disorder which is a cell proliferative disorder such as cancer, cervical or uterine cancer, breast or lung cancer or ovarian cancer. (V) is useful diagnostically for monitoring the development or progression of cancer or tumour as part of clinical testing procedure. The present sequence represents an antibody light chain variable region amino acid sequence, which is used in the exemplification of the present invention.
                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                 61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                            1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTWTCRASSSVIYMCWQQK 60
                                                                                                                                                                                                                                                                         1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTWTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                  Query Match 100.0%; Score 656; DB 8; Length 127; Best Local Similarity 100.0%; Pred. No. 1.3e-40; Matches 127; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .. .22
'note= "signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IL-2 chimeric antibody light chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR15323 standard; protein; 145 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "J1-region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23. .117
/note= "V-region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           129. .145
/note= "C-region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (BOEF ) BOEHRINGER MANNHEIM GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Interleukin-2; immunosuppressant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Knapp W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90DE-04018442.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            91EP-00109303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
(revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Weidlu U, Kaluza B,
                                                                                                                                                                                                                                                                                                                                                                                             121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                       SGTKLEI 127
                                                                                                                                                                                          Sequence 127 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-JUN-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-OCT-2003
25-MAR-2003
16-MAR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-DEC-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3P460674-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAR15323;
                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
AAR15323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
        $$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                             ð
```

WPI; 1991-363168/50

```
61 PGSSPKPWIQATSNIAPGVPSRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                     This sequence is from the light chain variable region of an anti-IL2R alpha monoclonal antibody. The antibody is only weakly inhibitory on its own. When anti-IL2R alpha antibodies which are strongly inhibitory on their own are used with anti-CD4 antibodies which are also strongly inhibitory, their immunosuppressive properties are improved; they synergistically inhibit T-helper cell proliferation to effectively inhibit transplant rejection at low doses without significantly reducing the general immune response. No such synergistic effect is observed with the weakly inhibitory MAD M-215. See AAQ36607-Q36616. (Updated on 10-MAR-2003 to add missing OS field.) (Updated on 25-MAR-2003 to correct PN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antibody engineering; chimeric antibody; cytostatic; gene therapy; vaccine; gastrointestinal disease; immune response; melanoma; malignancy; breast cancer; hepatocellular carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PGSSPKPWIYGTSTLASGVPTRFSGSGGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MDFQVQIFSFLLISASVIMSRGKIVLSQSPAILSASPGEKVTWTCRASSSISYMHWYQQK 60
                                        se as immunosuppressant - comprises .. monoclonal anti-IL2R alpha- or anti-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "Mature 2B8 light chain variable region protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Light chain variable region gene (VL)"
                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match

88.3%; Score 579; DB 2;
Best Local Similarity 89.8%; Pred. No. 6.2e-35;
Matches 114; Conservative 4; Mismatches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2B8 light chain variable region protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .22
/label= Signal peptide
                                     for use
                                        Synergistic antibody compsn. for us monoclonal anti-CD4 antibodies and IL2R beta antibodies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ż
                                                                                                                     Example 1; Page 15; 18pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADV92494 standard; protein; 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-JUN-2003; 2003CN-00129290.
25-NOV-2003; 2003CN-01119930.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-NOV-2003; 2003US-00723003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23. .129
/note= "L
23. .129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 SGTKLEM 127
N-PSDB; AAQ36613.
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 145 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US2004254108-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MAJJ/) MA J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADV92494;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADV92494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
  #XFFFXXXXCCCCCCCCCXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BX#X#XBX#X##X##X##X##X##X##X##X##X##X#
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PGSSPKPWIYGTSTLASGVPTRPSGSGSGTSYSLTISRVBAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PGSSPKPWIQATSNLAFGVPSRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                  The sequence is that of the interleukin-2 (IL-2) chimeric antibody light chain, coded by clone 215. Antibodies against IL-2 receptors are useful as immunosuppressants, and are much less immunosuppressants are useful antibodies. See also ARM15221-RM3256. (Updated on 25-MAR-2003 to correct PI field.) (Updated on 24-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                        New recombinant DNA encoding chimeric antibody - with human constant and non-human variable regions, esp. directed against interleukin 2 receptor
                                                                                                                                                                                                                                                                                                                                                                                                         1 MDFQVQIFSFLLISASVIMSRGKIVLSQSPAILSASPGEKVTWTCRASSSISYMHWYQQK
                                                                                                                                                                                                                                                                                                                                                                                    1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunosuppression, tissue transplantation, graft; L chain, V region, I-helper cell inhibition, transplant rejection, MAb;
                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                    Score 579; DB 2; Length 145; Pred. No. 6.2e-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Anti-IL2R-alpha antibody M-215 light chain variable region.
                                                                                                                                                                                                                                                                                                                                            9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      117. .128
/label= J4-region
129. .145
/label= start_of_Constant_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Riethmueller G;
                                                                                                                                                                                                                                                                                                                                          4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23. .116
/label= Variable-region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR32127 standard; protein; 145 AA.
                                                                                                Disclosure; Page 12; 24pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kaluza B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BOEF ) BOEHRINGER MANNHEIM GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .22
/label= signal
                                                                                                                                                                                                                                                                                                    88.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91DB-04143214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (revised)
(revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                          Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    T-helper cell inhibitic interleukin-2 receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scheuer W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 SGTKLEM 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1993-037582/05.
                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
N-PSDB; AAQ15115.
                                                                                                                                                                                                                                                              Sequence 145 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-DEC-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-MAR-2003
10-MAR-2003
02-JUN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DE4143214-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-JAN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Weidle U,
```

AAR32127;

RESULT 3 AAR32127 Peptide Region Region Region

ö

Gaps

ö

19

121

61

요 ò 셤 ઠે 셤

```
N-PSDB; ADV98556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GUOY/) MA J.
                                                                                                                                                                                                                                                                                                                                                                                                            10-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                         ADV92498;
                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       fив
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          é
                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                        ö
                                                                                                                     The present invention relates to a chimeric protein having a Flt3 ligand (FL) or its biologically active fragment and a proteinuous or peptidyl tumoricidal agent. The invention is useful for treating malignancy, neoplasm e.g. melanoma, breast cancer, hepatocellular carcinoma and as a vaccine for eliciting an immune response. The invention is also useful in gene therapy. The present sequence is the 2B8 light chain variable region
                                                                                                                                                                                                                                                                                                          PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                              PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                  New chimeric protein comprises an Flt3 ligand and a proteinuous or peptidyl tumoricidal agent, useful for treating malignancy or neoplasm, e.g. melanoma, breast cancer, or hepatocellular carcinoma.
                                                                                                                                                                                                                                                        MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTWTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein engineering; pharmaceutical; cytostatic; vaccine; cancer; neoplasm; melanoma; breast tumor; hepatocellular carcinoma.
                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel chimeric protein-related 2B8 light chain protein SeqID38.
                                                                                                                                                                                                                   Score 578; DB 9; Length 129;
Pred. No. 6.5e-35;
2; Mismatches 10; Indels
                                                                                                     Claim 23; SEQ ID NO 38; 158pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CO INC.
                                                                                                                                                                                                                                                                                                                                                                                                    ADV98557 standard; protein; 129 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SYMB-) SYMBIGENE ACQUISITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-JUN-2003; 2003CN-00129290.
25-NOV-2003; 2003CN-01119930.
26-NOV-2003; 2003US-00723003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-NOV-2003; 2003CN-01119930.
26-NOV-2003; 2003US-00723003.
28-NOV-2003; 2003TW-00133577.
                                                                                                                                                                                                                     88.1%;
90.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-JUN-2004; 2004WO-US017765
                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                       Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                                    121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                               ||||||||
GGTKLEI 127
                                     2005-030218/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2005-075540/08
                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                               N-PSDB; ADV92493
                                                                                                                                                                                                  Sequence 129 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2005001048-A2
(Guox/) Guo Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Guo Y;
                  Guo X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                        24-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-JAN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus sp.
Synthetic.
                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                     ADV98557;
                                                                                                                                                                                 protein
                  ٦,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ma J,
                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                              g
8
                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                   용
```

```
ö
                                                                                                                                                                                                               This invention relates to a novel chimeric protein comprising an Flt3 ligand, or its biological fragment, and a proteinuous or peptidyl tumoricidal agent. The invention may be useful for the production of compounds with a cytostatic activity or a vaccine. The composition and methods are useful for preventing or treating neoplastic conditions, such as melanoma, breast cancer or hepatocellular carcinoma. The present sequence is that of a protein which is related to the chimeric proteins of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antibody engineering; chimeric antibody; cytostatic; gene therapy; vaccine; gastrointestinal disease; immune response; melanoma; malignancy; breast cancer; hepatocellular carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVBABDAATYYCOOWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
New chimeric protein for preventing or treating neoplastic conditions, e.g. melanoma, breast cancer or hepatocellular carcinoma, comprises an Flt3 ligand or its fragment, and a proteinuous or peptidyl tumoricidal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILSASPGBKVTWTCRASSSVSYIHWFQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "Light chain variable region gene (VL)"
130. .235
/note= "Human kappa chain constant cDNA (CL)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Anti-CD20 chimeric antibody light chain protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88.1%; Score 578; DB 9;
90.6%; Pred. No. 6.5e-35;
iive 2; Mismatches 10
                                                                                                                                                              Example 5; SEQ ID NO 38; 147pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .22
/label= Signal peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADV92498 standard; protein; 235 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-JUN-2003; 2003CN-00129290.
25-NOV-2003; 2003CN-01119930.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-NOV-2003; 2003US-00723003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 GĞTKÜĞİ 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 115; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 129 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US2004254108-A1
```

```
Flt3 ligand or its fragment, and a proteinuous or peptidyl tumoricidal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9411026-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IDEC-) IDEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-NOV-1992;
                                                                                                                                                                                                                                                                                                                                                                                                           25-MAR-2003
01-FEB-1995
                               2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cell lysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nybridomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Reff MB;
                               Example
           agent.
                                                                                                                                                                                                                                                                                                                                               RESULT
 ð
                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                            The present invention relates to a chimeric protein having a Flt3 ligand (FL) or its biologically active fragment and a proteinuous or peptidyl tumoricidal agent. The invention is useful for treating malignancy, neoplasm e.g. melanoma, breast cancer, hepatocellular carcinoma and as a vaccine for eliciting an immune response. The invention is also useful in gene therapy. The present sequence is the anti-CD20 chimeric antibody
                                                                                                                                                                                                                                                                                                                    PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                 9
                                                New chimeric protein comprises an Flt3 ligand and a proteinuous or peptidyl tumoricidal agent, useful for treating malignancy or neoplasm, e.g. melanoma, breast cancer, or hepatocellular carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New chimeric protein for preventing or treating neoplastic conditions, e.g. melanoma, breast cancer or hepatocellular carcinoma, comprises an
                                                                                                                                                                                                                                                                           1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel chimeric protein-related anti-CD20 light chain protein SeqID42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein engineering; pharmaceutical; cytostatic; vaccine; cancer; neoplasm; melanoma; breast tumor; hepatocellular carcinoma.
                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                   88.1%; Score 578; DB 9; Length 235; 90.6%; Pred. No. 1.2e-34; ive 2; Mismatches 10; Indels
                                                                                                                                                                                                                                       Indels
                                                                                           Claim 23; SEQ ID NO 42; 158pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (SYMB-) SYMBIGENE ACQUISITION CO INC.
                                                                                                                                                                                                                                                                                                                                                                                                                      ADV98561 standard; protein; 235 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; 2003CN-00129290.
; 2003CN-01119930.
; 2003US-00723003.
; 2003TW-00133577.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-JUN-2004; 2004WO-US017765.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                               SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                  121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2005-075540/08.
                    2005-030218/03
                                                                                                                                                                            chain protein
                                                                                                                                                                                                                              Best Local Similarity
Matches 115; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; ADV98560.
                                                                                                                                                                                                Sequence 235 AA;
                              N-PSDB; ADV92497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO2005001048-A2.
 Guo Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-NOV-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-NOV-2003;
28-NOV-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-JUN-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-JAN-2005
                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                           ADV98561
 ۵,
                                                                                                                                                                             light
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ma J,
                                                                                                                                                                                                                                                                                                                                                                                                            ADV98561
                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
 셤
                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                       ठ
                                                                                                                                                                                                                                                                                                                                               ò
```

```
This invention relates to a novel chimeric protein comprising an Flt3 ligand, or its biological fragment, and a proteinuous or peptidyl tumoricidal agent. The invention may be useful for the production of compounds with a cytostatic activity or a vaccine. The composition and methods are useful for preventing or treating neoplastic conditions, as melanoma, breast cancer or hepatocellular carcinoma. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PGSSPKPWIYGTSTLASGVPTRFSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 PGSSPKPWIYATSNIASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Treating B cell lymphoma with chimeric antibody - against CD20, causing rapid depletion of peripheral B cells, also new antibodies and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cell lymphoma chimeric antibody; CD20; peripheral blood cells;
                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The sequence is the murine variable region light chain derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Newman RA;
                                                                                                                                                                                                                                                                                                                                                                              Length 235;
                                                                                                                                                                                                                                                                                                                                                                                                                                           10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hanna N, Leonard JE,
                                                                                                                                                                                                                                                                                                                                                                              Score 578; DB 9;
Pred. No. 1.2e-34;
2; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Murine variable region light chain from 2BS.
SEQ ID NO 42; 147pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR55214 standard; protein; 128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure, Fig 4; 101pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93WO-US010953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92US-00978891
93US-00149099
                                                                                                                                                                                                                                                                                                                                                                                    88.1%;
90.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Anderson DR, Rastetter WH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1994-183162/22.
N-PSDB; AAQ65630.
                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 115; Conserv
                                                                                                                                                                                                                                                                   of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GGTKLBI
                                                                                                                                                                                                                                                                                                                             Seguence 235 AA;
```

```
WPI; 2003-352746/33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-DEC-2002
                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                      ABU08393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fue sp
                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               é
                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Remodeling a peptide, by removing a saccharyl subunit from the peptide to form truncated glycan, and adding or deleting glycosyl groups to a peptide and/or adding modifying group of a peptide to remodel the
                                                                                                                                                         PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                             PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                         9
murine anti-CD20 monoclonal antibody 2BS. See also AAQ65629-35. (Updated
on 25-MAR-2003 to correct PN field.) (Updated on 25-MAR-2003 to correct
PI field.)
                                                                                                                                                                                                                                                                                                                                 remodeling, glycoconjugation; glycosyltransferase; glycan; CD20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a cell-free, in vitro method of remodeling a peptide. The method involves removing a saccharyl subunit from the peptide, thus forming a truncated glycan, and contacting the truncated glycan with at least one glycosyltransferase and at least one glycosyl donor under conditions suitable to transfer at least one glycosyl donor
                                                                                                                   MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVIWTCRASSSVSYIHWFQQK
                                                                                                       MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                    Gaps
                                                                                     ö
                                                                  Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chen X;
                                                                                   11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                               Score 572; DB 2;
Pred. No. 1.8e-34;
2; Mismatches 11;
                                                                                                                                                                                                                                                                                                              Anti-CD20 antibody light chain variable region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hakes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bowe C,
                                                                                                                                                                                                                                                      ABR55872 standard; protein; 128 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example; Fig 82B; 900pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bayer R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (NEOS-) NEOSE TECHNOLOGIES INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-JUN-2002; 2002US-0387292P.
25-JUN-2002; 2002US-039177PP.
17-JUL-2002; 2002US-039694P.
16-AUG-2002; 2002US-0404849P.
28-AUG-2002; 2002US-0407527P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001US-0344692P.
2001US-0334233P.
2001US-0334301P.
                                                               87.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                      09-OCT-2002; 2002WO-US032263
                                                                                                                                                                                                                                                                                            (first entry)
                                                                            Best Local Similarity 89.8
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zopf D,
                                                                                                                                                                                                       127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-449162/42.
N-PSDB; ACC78894.
                                                                                                                                                                                    SGTKLEI 127
                                                                                                                                                                                                      GGTKLEI
                                               Sequence 128 AA;
                                                                                                                                                                                                                                                                                                                                            antibody; mouse
                                                                                                                                                                                                                                                                                                                                                                                 402003031464-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-OCT-2001;
28-NOV-2001;
28-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                               Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                          10-OCT-2001;
                                                                                                                                                                                                                                                                                            02-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            De Frees S,
                                                                                                                                                                                                                                                                                                                                                                                                     17-APR-2003
                                                                                                                                               61
                                                                                                                                                                                    121
                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                          ABR55872;
                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide
                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                   RESULT 9
                                                                                                                                                                                                                                             ABR5587
                                                                                                                                                                                                                                                        ឧឧឧ
                                                                                                                                                                                                     셤
                                                                                                        ð
                                                                                                                         g
                                                                                                                                              ò
                                                                                                                                                               요
                                                                                                                                                                                   ઠે
```

```
to the truncated glycan, thus remodeling the peptide. Conjugates can be formed between a granulocyte colony stimulating factor (G-CSF) peptide, interferon alpha peptide, interferon beta peptide, erythropoietin. Cactor IX peptide, follicle stimulating hormone peptide, erythropoietin (EPO) peptide, granulocyte macrophage colony stimulating factor (GM-CSF) peptide, interferon-gamma peptide, tabbal-protease inhibitor (A-IP) peptide, interferon-gamma peptide, issue plasminogen activator (TPA) peptide, interleukin-2 (IL-2) peptide, tissue plasminogen activator (TPA) peptide, interleukin-2 (IL-2) peptide, factor VIII peptide, TNFalpha receptor/immunoglobulin (Ig) G fusion peptide, urokinase peptide, anti-coptortein ID/III monoclonal antibody peptide, chimeric anti-HER2 altibody peptide, anti-respiratory syncytial virus (RSV) F peptide, anti-copi antibody peptide, enti-respiratory syncytial virus (RSV) F peptide, anti-nosulinate B surface antigen (Hbasg), human growth hormone (HGH) peptide, and a modifying group, where the modifying group is covalently attached to the peptide through an intact glycosyl linking group. The method is useful for a cell-free, in vitro method of remodeling the above mentioned peptides. The present sequence represents the murine anti-CD20 antibody light chain mature variable region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVBABDAATYYCOOWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B cell lymphoma; chimeric anti-CD20 antibody; cytostatic; mouse; VL; expression vector; murine; light chain; variable region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23. .128
/label= Mature_anti-CD20_antibody_VL_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Reff ME;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Murine anti-CD20 antibody light chain variable region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Newman RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 572; DB 6;
Pred. No. 1.8e-34;
2; Mismatches 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .22
/label= Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Leonard JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABU08393 standard; protein; 128 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-JUL-2001; 2001US-00911703.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           87.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95US-00475813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-JUN-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 87.2
Best Local Similarity 89.8
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hanna N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (IDEC-) IDEC PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JS2002197255-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Anderson DR,
Rastetter WH;
```

```
Claim 31; SEQ ID NO 12; 200pp; Japanese.
  ሯ
                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                       ö
                        Treating B cell lymphoma in humans, comprises administering immunologically active, chimeric anti-CD20 antibodies and/or radiolabeled anti-CD20 antibodies to the human.
                                                                                                                                                                                                                                                                                                                                                                                PGSSPKPWIYGTSTLASGVPTRFSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                        9
                                                                                                 The present invention relates to a method for treating B cell lymphoma. The method comprises administering at a first administration period, an immunologically active, mouse/human chimeric anti-CD20 antibody and/or administering, at a second administration period, a radiolabelled anti-CD20 antibody, to the human subject. The invention also discloses expression vectors that may be used in the method of the present invention. The method is useful for treating B cell lymphoma in humans. The present sequence represents murine anti-CD20 antibody light chain variable region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antibody binding to CD20 and having Fc-bound sugar chains of low fucose content for treatment of cancer and immune disorders.
                                                                                                                                                                                                                                                                                                                             MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTWTCRASSSVSYIHWFQQK
                                                                                                                                                                                                                                                                                                              MDPQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunosuppressant; cytostatic; antibody; CD20; N-acetylglucosamine; sugar chain; fucose; N-acetylglucosamine; sugar chain; cancer; immune disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nakano
                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                           Score 572; DB 6; Length 128;
Pred. No. 1.8e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Satoh M,
                                                                                                                                                                                                                                                                                    11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mouse anti-CD20 antibody light chain variable region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shinkawa T,
                                                                                                                                                                                                                                                                                    2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADC66268 standard; protein; 128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Uchida K,
                                                                           Example; Fig 4; 51pp; English
                                                                                                                                                                                                                                                        87.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-DEC-2001; 2001JP-00392753.
09-APR-2002; 2002JP-00106948.
01-NOV-2002; 2002JP-00319975.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-DEC-2002; 2002WO-JP013534.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (KYOW ) KYOWA HAKKO KOGYO
                                                                                                                                                                                                                                                                                      Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sakurada
                                                                                                                                                                                                                                                                                                                                                                                                                   SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                            127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-559274/52
                                                                                                                                                                                                                                                                        Local Similarity
 N-PSDB; ABX94206.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; ADC66267.
                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTKLEI
                                                                                                                                                                                                                                  Sequence 128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2003055993-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shitara K,
                                                                                                                                                                                                                                                                                                                                                                 19
                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADC66268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADC66268
ð
                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                  Š
```

```
61 PGSSPKPWIYGTSTLASGVPTRFSGSGSTSYSLTISRVBABDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to an improved method for treating B cell lymphoma comprising administering an anti-CD20 antibody. The improvement comprises administering at least one chemotherapeutic agent. The antibody causes a substantial depletion of peripheral B cells. The antibody is chimeric anti-CD20 or C2B8. The method is useful for treating B cell lymphoma.
                                                                                                                                                                                                                                                                                                                                                                                                             PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCOOWTSNPPTFG 120
The invention relates to cells producing an antibody molecule specifically binding to CD20 are new, in which the antibody contains Neglecifically binding to CD20 are new, in which the antibody contains Neglecoside bond complex sugar chains bonded to the Region of the antibody peptide chains, of which less than 20% have a fucose residue bonded to the Neacetylgulcosamine residue at the reducing end of the sugar chain. The cells are used in the treatment and prevention of cancer and immune disorders. This sequence corresponds to a protein used in the
                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                  MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGBKVTWTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                at
                                                                                                                                                                                                                                                                                            1 MDFQVQIPSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                       0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Treating B cell lymphoma by administering an anti-CD20 antibody and
                                                                                                                                                                                                               Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B cell lymphoma; anti-CD20; peripheral B cell; C2B8;
Immunoglobulin light chain variable region; mouse; antibody
                                                                                                                                                                                                                                                   11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Reff MB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Murine immunoglobulin light chain variable region.
                                                                                                                                                                                                             87.2%; Score 572; DB 7;
89.8%; Pred. No. 1.8e-34;
iive 2; Mismatches 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Newman RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hanna N, Leonard JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example; SEQ ID NO 7; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     least one chemotherapeutic agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADE85686 standard; protein; 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92US-00978891.
93US-00149099.
97US-00921060.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-SEP-2002; 2002US-00238681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                   Best Local Similarity Constructive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (IDEC-) IDEC PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-897520/82.
                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; ADE85696.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTKLEI
                                                                                                                                                                           Sequence 128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US2003147885-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-NOV-1992;
03-NOV-1993;
29-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Anderson DR,
Rastetter WH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADE85686;
                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus ap.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
ADE85686
```

Length 128;

```
ઠે
                                                                                      g
                                                                                                                     ð
                                                                                                                                                  유
                                                                                                                                                                                8
                                                                                                                                                                                                         g
                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention relates to cells with modified sugar chain modifying enzyme activity. The enzyme activity of binding the 1-position of fucose to the 6-position of an N-acety/glucosamine at the reducing end of a complex N-glycoside linked sugar chain via an alpha-bond is absent or less than in the parent cell. The sugar chain modifying enzyme is preferably alpha 1,6-fucosyltransferase (ADE73052-ADE73053 and ADE73055-ADE73056). The invention is useful for the treatment and prevention of tumours, allergy, inflammation, autoimmune disease, circulatory disorders, and viral and bacterial infection. The present sequence was used in an example from the invention.
                                                                                                                                                                                                               PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVBABDAATYYCQQWSSNPFTFG 120
                                                                                                                                     9
                                                                                                                                                                   9
                                                                                                                                                           1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK
                                                                                                                                    1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
This sequence represents a murine immunoglobulin light chain variable region used in the method of the invention.
                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Antiallergic; Anti-inflammatory; Immunosuppressive; Antibacterial; Antiviral; Cytostatic; enzyme; alpha 1,6-fucosyltransferase; tumour; allergy; inflammation; autoimmune disease; circulatory disorder; viral infection; bacterial infection; murine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cells with reduced or absent alpha 1,6-fucosyltransferase activity treatment of tumors, allergy, inflammation, autoimmune disease, circulatory disorders, and viral and bacterial infection.
                                                                                                         ö
                                                                         Length 128;
                                                                                                         11; Indels
                                                                           Score 572; DB 7;
Pred. No. 1.8e-34;
                                                                                                       2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 6; Page 164-165; 187pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mori K, Yamano K;
                                                                                                                                                                                                                                                                                                                                                                   ADE73083 standard; protein; 128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-APR-2003; 2003WO-JP004507
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Murine FUT8-related sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-APR-2002; 2002JP-00106953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (KYOW ) KYOWA HAKKO KOGYO KK
                                                                           87.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                       Matches 114; Conservative
                                                                                                                                                                                                                                                                                        127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-833570/77.
                                                                                                                                                                                                                                                           SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Satoh M,
                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                              GGTKLEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; ADE73068.
                                               Sequence 128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003085107-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                             29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-OCT-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yamane N,
                                                                                                                                                                                                                                                                                                                                                                                                 ADE73083;
                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                        121
                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                     ន្តដ្ឋនូ
                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                셤
                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                          ò
                                                                                                                                       ò
                                                                                                                                                                                                 ઠે
```

Sequence 128 AA;

```
The invention relates to a drug containing as the active ingredient, an antibody composition produced by cells tolerant to a lectin recognising a sugar-chain structure in which an alpha-bond is formed between the 6-position of N-acetylglucosamine at the reducing end of an N-glycoside bond-type complex sugar chain and the 1-position of fucose. The drugs are useful in screening and treating patients not suitable for drugs not preventives or remedies for diseases accompanying tumour, allersy or inflammation, autonimume diseases accompanying tumour, allersy or inflammation, autonimume diseases of the circulatory system, and viral or bacterial infections. In a method from the invention, a CCR4 gene was used for constructing a vector (CAG-CCR4/pcDNAs) for producing a transformant EL-4 cell (ATC TIB-39) to express chimeric CCR4. Antibody-dependent cytotoxicity of the thus produced antibody composition was confirmed. The current sequence represents a protein related to the
                                          ö
                                                                                                                                                                               61 PGSSPKPWIYATSNIASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                           PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCOOWSSNPFTFG 120
                                                                                9
                                                                                                     1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drugs containing antibody compositions produced by cells tolerant to lectin recognizing specific sugar-chain structure, useful in screening and treating patients not suitable for drugs not derived from these
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cytostatic; antiallergic; immunomodulator; cardiant; virucide; antibacterial; drug; antibody; lectin; N-acetylglucosamine; fucose; tumour; allergy; inflammation; autoimmune disease; circulatory system; viral; bacterial; infection; CCR4.
                                                                              1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                            Gapa
                                          ö
                                          Indels
                                            11;
Score 572; DB 7;
Pred. No. 1.8e-34;
                                          2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; SEQ ID NO 6; 157pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein related to the invention #1
                                                                                                                                                                                                                                                                                                                                                                              ADF60660 standard; protein; 128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-APR-2003; 2003WO-JP004503.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-APR-2002; 2002JP-00106949.
  Query Match 87.2%;
Best Local Similarity 89.8%;
Matches 114; Conservative ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (KYOW ) KYOWA HAKKO KOGYO KK
                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-FEB-2004 (first entry)
                                                                                                                                                                                                                                        121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-812676/76.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Niwa R, Shitara K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; ADF60645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2003084569-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                invention
                                                                                                                                                             61
                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                ADF60660;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus
```

```
This invention relates to novel erythropoletin (EPO) peptides and the remodelling and glycoconjugation of these naturally occurring peptides thereof. Specifically, each BPO peptide comprises one or more glycans and has a glycoconjugation of these naturally occurring peptides that and glycoconjugate molecule such as polyethylene glycol (BEG) attached to it. Accordingly, the present invention provides glycoBGylated BPO peptides that have either monoantennary, biantennary or triantennary glycans covalently attached thereto. As such, these peptides are useful for the treatment of anaemia, and hence exhibit antianaemic activities working to increase hemanacorit levels in mammals, in particular in humans i.e. increasing the relative volume of blood occupied by erythrocytes. Purthermore, EPO therapy can be used to treat kidney callingation gatients. This polypeptide is a human protein sequence related invention.
                                   ö
                                                                                                                                                 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                              9
                                                                                              MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK
                                                                MDPQVQIPSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                          mouse; murine; antibody; erythropoietin; BPO; glycoconjugation;
glycoPEGylated BPO peptide; anaemia; antianaemic; haematocrit level;
kidney dialysis; haematology; CD20.
                                                                                                                                                                                                                                                                                                                                                                                                           Mature variable light chain anti-CD20 murine antibody protein SeqID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel erythropoietin peptide comprising one or more glycans, having glycoconjugate molecule covalently attached to peptide, useful for treating anemia in mammal such as human.
                                   ö
     Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chen X;
                                 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ď
 Score 572; DB 7;
Pred. No. 1.8e-34;
2; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hakes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; SEQ ID NO 60; 1018pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Воме
                                                                                                                                                                                                                                                                                                           ADN49732 standard; protein; 128 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bayer R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (NEOS-) NEOSE TECHNOLOGIES INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-NOV-2002; 2002US-00287994.
06-JAN-2003; 2003US-00360770.
19-FEB-2003; 2003US-00360779.
 89.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-OCT-2003; 2003WO-US031974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2003US-00410945
                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                 Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Frees S, Zopf D,
                                                                                                                                                                                             SGTKLEI 127
                                                                                                                                                                                                                           121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2004-399848/37.
                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-399848
N-PSDB; ADN49731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2004033651-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-FEB-2003;
09-APR-2003;
                                                                                                                                                                                                                                                                                                                                                                           15-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-APR-2004
                                                                                                                              61
                                                                                                                                                               61
                                                                                                                                                                                               121
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                             ADN49732;
                                                                                                                                                                                                                                                                         RESULT 15
ADN49732
                                                                                         셤
                                                                                                                              ò
                                                                                                                                                             셤
                                                                                                                                                                                                                          윰
                                                                                                                                                                                                                                                                                                             ò
```

```
61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a cell-free in vitro method (M1) of remodeling a
                                                                                                                                                       61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                           Hemostatic; Hepatotropic; Antianemic; Cytostatic; Osteopathic;
Antibacterial; Respiratory-Gen.; Antinflammatory; Nephrotropic;
Antiinfertility; Antitubercular; Tuberculostatic; protein engineering;
bleeding; factor VIII deficiency; factor IX deficiency; liver cirrhosis;
infertility; anemia; end-stage renal disease; acute myelogenous leukemia;
osteoporosis; pulmonary fibrosis; tuberculosis.
                                                                                               1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK 60
                                                                                                                1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTWTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cell-free in vitro method of remodeling peptide comprising poly(ethylene glycol) useful for generating glycopeptide suitable for therapeutic uses in mammal, involves addition or deletion of glycosyl groups to peptide.
                                                                    Gaps
                                                                    ö
                                        Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chen X;
                                                                 11, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Накев D,
                                     Score 572; DB 8;
Pred. No. 1.8e-34;
2; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                Mouse anti-CD20 light chain variable region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 60; 1024pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bowe C,
                                                                                                                                                                                                                                                                                                                Ź
                                                                                                                                                                                                                                                                                                              ADU74408 standard; protein; 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bayer R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NEOSE TECHNOLOGIES INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2003US-00410913.
2003US-00410930.
2003US-00410945.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2003US-00410962.
2003US-00410980.
2003US-00410997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-APR-2004; 2004WO-US011494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-APR-2003; 2003US-00411049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2003US-00411012
                                     Query Match
Best Local Similarity 89.84;
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2003US-00411043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             003US-0041102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           zopf D,
                                                                                                                                                                                                            121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-833698/82.
                                                                                                                                                                                                                                       121 GGTKLEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; ADU74407.
             Sequence 128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2004099231-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-APR-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39-APR-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-APR-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-APR-2003;
                                                                                                                                                                                                                                                                                                                                                                     10-FEB-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           De Frees S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-NOV-2004
                                                                                                                                                                                                                                                                                                                                         ADU74408;
                                                                                                                                                                                                                                                                                  RESULT 16
ž g
                                                                                                                        셤
                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                     ò
```

.

```
peptide comprising poly(ethylene glycol). (MI) is useful for remodeling protein to generate glycopeptide having desired glycosylation pattern suitable for therapeutic use in mammal. (MI) is useful for remodeling peptides chosen from immunoglobulm, erythropotetin, tisue-type activator peptide, etc. (MI) is useful for remodeling (a) G-GSF which is useful for treating acute myeloid leukemia (AML), non-myeloid cancer patient receiving bone marrow transplant, (b) factor VII for treating bleeding episode, factor VIII deficiency, factor IX deficiency, liver cirrhosis, (c) FSH for patients undergoing intrauterine insemination, in vitro fertilization and for infertile patient, (d) EPO for treating anemic patient baving chronic renal insufficiency and end stage remain disease, anemic patient undergoing dialysis, (e) GM-CSF for treating acute myelogenous leukemia, (f) IFN-gamma for treating malignant osteoporosis, pulmonary fibrosis, tuberculosis, cryptococcal meningitis, etc. The glycopeptide produced using (MI) has specific customized or desired glycosylation pattern. (MI) allows efficient production of improved therapeutic moiety. The present sequence represents the amino acid sequence of a protein remodelled in the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVBABDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel cell that is neutralized to serum-free medium and carrying knockout of gene encoding enzyme involved in carbohydrate modification, useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PGSSPKPWIYATSNIASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cytostatic; antiinflammatory; immunosuppressive; vasotropic; virucide; antibacterial; drug discovery; cell culture; immune disorder; cancer; neoplasm; inflammation; autoimmune disease; allergy; antiallergic; viral infection; infection; bacterial infection; Pucosyltransferase 8 (alpha (1,6) fucosyltransferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTWTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kusunoki M, Kinoshita S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                            DB 8; Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                              11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fucosyltransferase 8 (alpha (1,6) fucosyltransferase.
                                                                                                                                                                                                                                                                                                                                                                                                            Score 572; DB 8;
Pred. No. 1.8e-34;
2; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Urakubo M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADZ59908 standard; protein; 128 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Satoh M, Iida S,
                                                                                                                                                                                                                                                                                                                                                                                                          87.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-OCT-2004; 2004WO-JP015315.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (KYOW ) KYOWA HAKKO KOGYO KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-OCT-2003; 2003JP-00350166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2005-346214/35.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SGTKLEI
                                                                                                                                                                                                                                                                                                                                                                        Sequence 128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2005035740-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-APR-2005.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nakano R,
Ohnuki N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADZ59908;
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
```

```
The invention describes a cert (1) that is neutralized to a security and a sugar chain modification, where fucose is linked by an activity at a sugar chain modification, where fucose is linked by an attenticipates in a sugar chain modification, where fucose is linked by an attenticipates in a sugar chain modification of Nacetylalucosamine at the reducing end of an N-glycoside-binding complex sugar chain. Also described are: a neutralization (M1) method of cell to the serum free medium by (M1); a cell having a knocked out genome gene encoding the enzyme which is involved in the carbohydrate modification that is neutralized to the serum free medium, by (M1); a cell having a knocked out genome gene encoding the enzyme which is nivolved in the carbohydrate modification that is neutralized to the serum free medium. Corpodydrate modification that is neutralized to the serum free medium.

(1) is useful for manufacturing a glycoprotein composition, which composition from the culture medium. The glycoprotein composition from the culture medium. The glycoprotein composition from the culture medium. The glycoprotein composition from the culture medium. The glycoprotein callsease such as cancer, inflammatory disease, autoimmune disease, autoimmune disease, allergy, circulatory disorder, virus or bacterial infection. This is the anibrand of producing glycoprotein compositions useful in drug discovery.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 PGSSPKPWIYATSNLASGVPVRFSGSGGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTWTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; CC49 antibody; C2B8 antibody; tumour associated antigen; TAG-72; neoplasm; neoplastic disorder; haematologic neoplasm; colon cancer; non-Hodgkin's lymphoma; haematologic malignancy; tumour.
manufacturing glycoprotein composition useful in treating, e.g. cancer
                                                                                      to a serum-free
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11; Indels
                                                                                      invention describes a cell (I) that is neutralized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87.2%; Score 572; DB 9;
89.8%; Pred. No. 1.8e-34;
iive 2; Mismatches 11.
                                            Disclosure; Page 122-123; 135pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human C2B8 antibody light chain protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAE27925 standard; protein; 235 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chinn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JAN-2001; 2001US-0264318P.
16-NOV-2001; 2001US-0331481P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JAN-2002; 2002WO-US002373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Braslawsky GR, Hanna N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 89.8
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (IDEC-) IDEC PHARM CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 128 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200260955-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ното варіепв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE27925;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
```

```
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                 Domain deleted CC49 antibodies comprise a heavy chain human CC49 domain deleted sequence in which CH2 domain has been deleted and are reactive with tumour associated antigen (TAG) -72. The C2B8 antibodies are reactive with CD20 and comprise a heavy chain having a sequence of a derived domain deleted C2B8 construct where the CH2 domain has been deleted. Sequences of the invention are useful for imaging a neoplasm. They are also useful for treating myelosuppressed patients suffering from neoplastic disorder such as haematologic neoplasm, preferably non-Hodgkin's lymphoma. Antibodies of the invention are also used to treat neoplastic disorder, colon cancer and haematologic malignancy. They are useful for reducing tumour size, inhibiting tumour growth and/or useful for reducing the survival time of funour-bearing animals and for treating tumours. The present sequence is human C2B8 light chain protein. This sequence is used in the exemplification of the invention
                                           Novel domain deleted CC49 antibody reactive with tumor associated antigen -72, or C2B8 antibody reactive with CD20, useful for treating myelosuppressed patient suffering from a neoplastic disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vsotropic; immunomodulator; protozoacide; antidiabetic; nephrotropic;
thyromimetic; hepatotropic; haemostatic; antileprotic; antibacterial;
neuroprotective; antipsoriatic; antirheumatic; antiarthritic; antiulcer;
                                                                                                                                     present invention relates to domain deleted CC49 or C2B8 antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C2B8; antibody; cytostatic; antiallergic; antianemic; antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                   Length 235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dermatological; immunosuppressive; antiinflammatory.
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 572; DB 5;
Pred. No. 3.2e-34;
2; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABB82834 standard; protein; 235 AA.
                                                                                                       Example 1; Fig 3B; 74pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JAN-2001; 2001US-0264318P.
16-NOV-2001; 2001US-0331481P.
21-DEC-2001; 2001US-0341858P.
                                                                                                                                                                                                                                                                                                                                                                                                                     87.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 89.8%;
Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JAN-2002; 2002WO-US002374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Antibody C2B8 light chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (IDEC-) IDEC PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 SGTKLBI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GGTKLEI 127
WPI; 2002-698547/75.
N-PSDB; AAD45754.
                                                                                                                                                                                                                                                                                                                                                                                      Sequence 235 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200296948-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABB82834;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 19
ABB82834
 윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

```
The invention relates to a dimeric antibody (1) comprising several monomeric subunits, where the monomeric subunits are non-covalently associated. (I) is useful for treating a disorder, especially immune disorder, and neoplastic disorder such as relapsed Hodgkin's disease, resistant Hodgkin's disease high grade, low grade and intermediate grade non-Hodgkin's lymphomas, B cell chronic lymphocytic leukemia (B-CLL), lymphoplasmacyroid lymphoma (LPL), mantle cell lymphoma (MCL), Gollicular lymphoma (FL), diffuse large cell lymphoma (DLCL), Burkitt's follicular lymphoma (PL), diffuse large cell lymphoma, angioimmunoblastic lymphoma and l cleaved cell, large cell immunoblastic lymphoma and l large cell, large cell immunoblastic lymphoma surkitt's and non-Burkitt's, follicular, mixed small cleaved and large cell lymphomas, in a mammal (see ABZ24017 for a
                                                                                                                                                 neoplastic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PGSSPKPWIYATSNLASGVPVRFSGSGSGTSYSLTISRVEAEDAATYYCQQWTSNPPTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVBABDAATYYCQQWSSNPFTFG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MDFQVQIISFLLISASVIMSRGQIVLSQSPAILSASPGEKVTWTCRASSSVSYIHWFQQK 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cleaved and large cell lymphomas, in a mammal (see ABZ24017 for a detailed description of the various uses of (1)). The present sequence represents the antibody C2B8 light chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antibody engineering; cancer; neoplasm; cytostatic; immune disorder; graves disease; antithyroid; endocrine disease; hashimotos disease; immunosuppressive; rheumatoid arthritis; antiarthritic; antirheumatic; inflammation; musculoskeletal disease; systemic lupus erythematosus; antiinflammatory; dermatological; dermatological disease; metabolic disorder; aloegrens syndrome. orular disease; thrombocytopenic purpura; hemostatic; hematological disease; multiple sclerosis; neuroprotective; neurological disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MDFQVQIPSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK
                                                                                                                                                                             disorder, has several non-covalently associated monomeric subunits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Antibacterial; Virucide; Antiparasitic; Fungicide; Immunotherapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                              Novel dimeric antibody useful for treating immune disorder and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87.2%; Score 572; DB 6; Length 235; 89.8%; Pred. No. 3.2e-34; ive 2; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            myasthenia gravis; muscular-gen.; bacterial infection; fung
fungicide; viral infection; virucide; parasitic infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Antibody fusion 2H7 VH L11S-IgG1 (CSSS-S)H-K290QCH2-CH3
Hariharan K;
Chinn P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADY21925 standard; protein; 500 AA.
                                                                                                                                                                                                                                      Example 1; Fig 3B; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 89.8
Matches 114; Conservative
Braslawsky GR, Hanna N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 SGTKLEI 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 GGTKLEI 127
                                                        WPI; 2003-140446/13.
                                                                                           N-PSDB; ABZ24018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 235 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2005017148-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-MAY-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADY21925;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 20
```

Sequence 500 AA;

X S

Ledbetter JA, Hayden-Ledbetter MS, Thompson PA; 

24-FEB-2005.

24-DEC-2003; 2003WO-US041600.

26-JUL-2003; 2003US-00627556

(TRUB-) TRUBION PHARM INC

WPI; 2005-182370/19. N-PSDB; ADY21924.

New non-naturally occurring single chain protein comprising polypeptides with binding domain, connecting regions and N-terminally truncated immunoglobulin, having immunological activity, useful for neutralizing infectious agent.

Disclosure; Page 383; 590pp; English

The invention relates to a non-naturally occurring single chain protein of capable of binding to a target molecule, the binding domain polypeptide comprising a heavy chain variable region, which comprises an amino acid cabable of binding to a target molecule, the binding domain polypeptide comprising a heavy chain variable region, which comprises an amino acid cabable of binding to a target molecule, the binding domain polypeptide comprising a connecting region attached to the first polypeptide comprising a connecting region attached to the first comprising a connecting region attached to the first comprising a connecting region attached to the first comprising a protein that is not not a subject (involved artached to the second protein of a protein or peptide that cather a protein that is less than 150 kp, which involves to the sound protein or peptide molecule are linked by a thred protein or peptide molecule is directly connected to the second protein or peptide molecule is directly connected to the second protein or peptide molecule is directly connected to the second protein or peptide molecule is directly connected to the second protein or peptide molecule is directly connected to the second protein or peptide molecule are linked by a third protein or peptide molecule are linked by a third protein or peptide molecule is not an antiabody, a member of the TWF family or the TWF receptor family, and is not conjugated with a bacterial toward or more compressing the polypeptide, axcressing the polypeptide of the compact of expressing the polypeptide, axcressing the polypeptide, axcressing the polypeptide of an animal), a polymulecide that encodes the polypeptide of the compact of expressing the polypeptide, axcressing the polypeptide of additional therapeuter comprising the polypeptide, axcressing the polypeptide or additional therapeuter comprising the polypeptide, axcressing the polypeptide or additional therapeuter comprising the polypeptide, axcressing the polypeptide or an animal, a damino and anormaturall the invention relates to a non-naturally occurring single chain protein

invention

61 PGSSPKPWIYGTSTLASGVPTRFSGSGSGTSYSLTISRVEAEDAATYYCQQWSSNPPTFG 120 1 MDFQVQIFSFLLISASVILARGQIVLSQSPAILSASPGEKVTMTCRASSSSVSYMHWYQQK 60 1 MDFQVQIFSFLLISASVIMSRGQIVLSQSPAILFASPGETVTMTCRASSSVIYMCWNQQK Gaps ö Length 500; 11; Indels Score 567; DB 9; Pred. No. 1.6e-33; 4; Mismatches 11; Match 86.4%; Local Similarity 88.2%; Les 112; Conservative 4 SGTKLEI 127 121 Query Match Best Loca Matches ઠ ð 셤 ð

Search completed: March 20, 2006, 07:35:40 Job time : 48.9655 secs

121 AGTKLEL 127

g